2. REVIEW OF RELATED LITERATURE
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Though there is abundant literature which points to need for life skills education and also its effectiveness which is based on studies conducted abroad- the dearth of studies in Indian context is felt. Since life skills are employed in wide range of settings, literature is also varied. The present review is by no means a comprehensive one but an attempt is made to present as much literature as possible so as to present the latest literature in the various heads for a clear picture.

Since WHO (1994) placed impetus on mental health promotion through ‘child friendly schools’ which impart life skills education in its curriculum, there have been many research studies both exploratory and experimental across many countries. Life skills education have been promoted by WHO (1994) as part of health education, however it is found to have multiple effects including improvement in academics, better social competence and self-esteem. The following studies illustrate the evidence that life skills training usefulness has been proven conclusively, though a meager number of studies point to the contrary.

The collected literature has been organized in such a fashion that it highlights the different dimensions and effects of life skills education or training. It is covered in the following heads:

1. Need for life skills education/training.
2. Usefulness of life skills education/training.
3. Design, content and implementation of life skills education/training.
4. Life skills education/training in other than school settings.
5. Life skills education /training for special groups.
6. Life skills education/training in combination with other programmes.

7. Life skills education/training in comparison with other programmes.

8. Other effects of life skills education/training.

9. Ineffectiveness of life skills education/training.

2.1. Need for Life Skills Education/Training:

There is much literature that indicates that life skills is needed by young people and should therefore be developed. The literature points to the deficits in life skills and the need to teach the same for abused children, shy children, pregnant adolescents, for anger control, prevention of drug use, delaying the initiation sexual activities and also for promotion of positive and health promoting behaviours. The possession of life skills or lack of it has been studied in various contexts but not as primary research problem. The following are the premises of the research studies which have highlighted the poor psychosocial competence in adolescents and children.

1. Studies focusing on identifying students’ assets and deficits that influence their ability to make positive choices.

2. Studies on factors influencing socialization in youth.

3. Studies investigating qualities and competencies employers look for in the young.

4. Studies on what promotes resilience in the face of adversity

5. Studies focusing on psychosocial origins of behaviour related health problems

6. Research pertaining to health promotion and prevention
WHO (1994) noted the findings of Tippelt (1988) study which found that socialization of young people in modern societies has become more complicated due to inherent tensions and controversies. One of the common conclusions from studies on socialization is that didactic foundation of education, relying on lectures, is no longer suitable for rapidly changing societies, and that life skills education, using more active teaching methods should be introduced in schools.

A nation wide survey of 47,000 students by Benson (1998) suggested that they had deficits in life skills, and recommended that educators should work towards enhancement of psychosocial competence through teaching friendship making skills, caring skills, assertiveness skills and resistance skills.

Research studies by Pedersen (1993); Rossouw (1990); WHO (1996) and Karmel (1984) set up to investigate what qualities and competencies employers look for in young recruits, found deficits in interpersonal and communication skills along with poor creativeness and negotiation skills.

Some researchers studied the resilience in the face of adversity and found lack of certain skills was responsible for poor resilience. Parker et al (1990) found lack of empathy, Beardslee (1989) found low levels of self understanding and Werner and Smith (1982) and Luthar (1991) reported poor communication skill and Shure (1991) poor problem solving.

MacDonald (1991) reported that substance use and abuse by adolescents have been found to be associated with high levels of stress, inability to discuss feelings, as a result of poor communication skills. Lack of other skills such as coping with stress and emotions was reported by Castro et al (1987) which have been
linked with inhalant use, cigarette smoking and other drug addiction. Substance users were found to be having low self-esteem, poor stress tolerance and multiple maladaptive coping and failed to relate with peers and parents.

Typically, research studies focusing on primary prevention that work towards promotion of self-esteem and self-efficacy also point out lack of certain life skills that result in behaviour related health problems. Psychosocial factors when seen as mediating or causal factors highlight the need for life skills education for adolescents. Low self-esteem has been found to be associated with alcohol and drug use by Kumfer and Turner (1990) and by Singh and Mustapha (1994). It has also been linked to delinquency by Dukes and Lorch in (1989), teenage pregnancy by Keddie (1992) and Plotnick (1992) and suicidal ideation by Choquet et al in (1993). Bandura (1990) reports that adoption of AIDS preventive health behaviour have been found to be related to perceived self-efficacy. Richard and Van-der-Pligt (1991) reported similar findings.

Research studies also point to links between self-efficacy and risk taking behaviour and cognitive performance. A study in India by Singh (1985) found that high self-efficacy results in higher cognitive performance. A study conducted in Sri Lanka by Niles (1986) demonstrated this relationship between a sense of competence and school achievements. It has also been suggested that students' perceived efficacy for self-regulated learning, influences their expectations for academic achievement.

WHO (2005a) states that, the youth are increasingly at risk for mortality and morbidity resulting from entirely preventable causes. Globally the
leading causes of death and disability among youth are unintentional injuries (accidents), violence, tobacco use, alcohol and other drug use and sexual behaviours that contribute to unintended pregnancies and sexually transmitted diseases including HIV, unhealthy dietary behaviours and poor physical activity. Research has proven that lack of development of requisite skills such as problem solving, stress coping, interpersonal skills, drug refusal and resistance skills, poor assertiveness and self-efficacy has been attributed to psychosocial problems among youth.

Botvin, Epstein and Schinke (1994) examined the predictors of smoking among 757 high risk inner city African American and Latino 7th graders. Results indicated that friends and peers were the most important social influences in predicting smoking. Several psychological factors, including feelings of hopelessness, low self-efficacy in life skills (social skills and refusal skills) and low self-esteem seemed related to increased susceptibility to smoking.

Elliot, Sheldon and Church (1997) conducted two studies to investigate both antecedents and consequences of pursuing avoidance personal goals on a sample of 231 under graduates (17-48 yrs age). Results revealed that neuroticism was positively related to the adoption of avoidance personal strivings in the first study and subjective low perception of life skills was associated with adoption of avoidance personal projects in the second study. These two proved deleterious to both retrospective and longitudinal subjective well-being.

Need for life skills training for both the parents and their adolescents, especially in communication were recommended by Pretorious, Ferriera and Edwards (1999) after they investigated inadequate parent-child relationship, problems with
regard to sexuality and substance use among African university students. They found that although inadequate parent-child relationship appears to contribute to substance abuse and sexuality problems; it can not be regarded as solely responsible, as multitude of factors also play a role.

Del Valle (2000) studied the treatment modalities adopted for treating male juvenile and adult sex offenders. It was found that they received almost identical treatments. It was also pointed out that fifty percent of these offenders began exhibiting deviant sexual behaviour in their youth, their transgressions and potential for sexual offensive behaviour went unnoticed. Since juvenile sex offenders risk deviant development and existing treatment modalities fail to address developmentally relevant changes, authors recommended inclusion of life skills training for them.

Rahman, Rob and Bhuiya (2005-2006) reported the study findings from pre and post tests of 379 matched respondents. They studied the effect of access to reproductive health education on youth of Bangladesh. It had significant effects on knowledge, attitudes and life skills. Before access to the information youth lacked knowledge and skills indicating need for life skills education.

Strydom and Strydom (2006) made an interesting observation that current publicity given to HIV/AIDS can lead to desensitisation, therefore they argue that information regarding HIV/AIDS should be provided through life skills training which is much more empowering.

Diaz, Secdales-Villa and Perez (2006) found that family involvement in adolescent drug abuse prevention programme is essential. They analysed the
factors related to participation in life skills training programme. The sample consisted of 485 students from three schools in Spain aged between 12-14yrs. The variable that predicted participation in the programme were, number of children and educational levels of parents, children’s drug use, family conflict, parental rearing style, relationship between parents and children and family communication. They also found that the families at highest risk of drug use are the ones that are least likely to participate in prevention programmes. Therefore, there is need to reexamine the strategies in order to increase participation in prevention programme for these kinds of families.

The following studies illustrate the extent to which health compromising behaviours are seen in young adolescents as a result of poor psychosocial competence.

Grunbaum et al (2002) reported findings from national surveillance on youth risk behaviours in the United States. They found that nearly three fourths of all deaths among persons aged 10-24 years result from only four causes: motor vehicle crashes, other unintentional injuries, homicide and suicide. 14% reported not using safety precautions while driving, 30.7% had ridden with a driver who had been drinking alcohol, 17.4% had carried a weapon during the past 30 days, 47.1% had drunk alcohol in the last 30 days and 8.8% had attempted suicide in the last 12 months preceding the survey. They also reported that 45.6 % of high school students have ever had sexual inter course, 42% of sexually active students had not used a condom at last sexual intercourse. Regarding dietary habits they found that 78.6% had not eaten at least five servings of fruits and vegetable in the past week, 67.8%
reported that they did not involve in any kind of physical exercise and 10.5% were obese. The figures though from a different country, should be a wake up call for India to take up similar surveys and take public health measures to protect its youth.

Mazur and Woynarowska (2004) conducted a study on antecedents of onset of health compromising behaviours in adolescents in Poland. They found that 43% adolescents reported at least one out of six risk behaviours (every day smoking, frequent episodes of drunkenness, drug abuse, early sexual initiation, frequent bullying and fighting) while 12% three or more. Boys were more likely than girls to be involved in multiple health compromising behaviours. Adolescents who involved in 4 or more risk behaviours, compared to those not involved, were at higher risk of poor health and low life satisfaction.

A survey of nation wide representative sample of 2574 boys and 2939 girls in grades 7th through 12th in USA by Simantov, Schoen and Klein (2000) revealed that adolescent boys and girls were equally likely to be regular smokers (11.2%). Boys (22.4%) and Girls (19.3%) were regular drinkers. They also found that exposure to child abuse and stressful life events were strongly associated with increased risk for boys' regular smoking. Similar associations were found for drinking too. For girls, history of abuse, violence within the family, depressive symptoms and stressful life events were significantly associated with regular smoking.

From the above studies, it is clear that rapid progress has not only made life easier but also more complex. Conventional/usual modes of socialization and education have been found ineffective. Every day increasing number of children
are placing themselves at risk due to unhealthy choices in behaviour and life style. Modern challenges require newer methods of empowering the youth and one of them is inclusion of life skills education in the regular curriculum. As illustrated above certain social, behavioural and health problems have been found to be originating due to lower levels of or absence of certain life skills which have been linked to poor self-esteem, self-efficacy and poor life satisfaction.

2.2. Usefulness of Life Skills Education/ Training:

Life skills approach has been found so useful that it has been applied for all age groups of children in and out of school setting. It has been employed in programmes with wide variety of objectives ranging from improving physical activity levels to preventing health compromising behaviours to promoting psychosocial competence.

2.2.1. Life Skills for Elementary and Primary School Children:

The following studies illustrate how life skills approach has been used to deliver intervention for elementary and primary school children.

Positive impacts of life skills programme on sixth graders were reported by Kreutter, Gewirtz and Davenny (1991). They examined the data from first year result of three year programme evaluation for a drug and alcohol prevention project. A target group consisting of 152 students received instruction in life skills curriculum. Additional group of 64 children made up the control group that received no treatment. Both the groups were pre and post tested on following variables: knowledge about and attitudes towards substances, self concept, passivity, and locus
of control. Results indicated that the programme had a significant positive impact on the target samples' passivity, knowledge about drugs and alcohol and self image.

Gilbert and Orlick (1996) targeted the grade two children through life skills training and assessed the extent to which children (a) learned to relax themselves at will, (b) successfully implemented stress control strategies and (c) increase the frequency of their highlights. Twenty four children from grade 2 students served as participants in pre and post testing design. Results indicated that the children learned to relax themselves at will, successfully implemented stress control strategies in variety of situations and increase in frequency of their highlights.

Llyod, Joyce and Hurry (2000) reviewed literature on the effectiveness of school based educational intervention targeted at children below 11 years. They concluded that early use of drugs such as tobacco and alcohol is associated with later drug misuse and the age of initiation into drugs is falling in UK and elsewhere. Educational interventions should start in the primary school to maximize any preventive impact, yet such education is under developed and poorly researched.

Botvin, Griffin and Paul (2003) examined the effectiveness of a substance abuse prevention programme in preventing tobacco and alcohol use among elementary school students in grades 3 through 6. The prevention programme taught social resistance skills and general personal and social competence skills. Rates of substance use behaviour, attitudes, knowledge, normative expectations, and related variables were examined among 1090 students from 20 schools that were randomly assigned to prevention programme or to serve as control group. Data were analysed at both the individual level and school level. Individual level analyses revealed that
intervention students reported less smoking in the past year, higher anti drinking attitudes, increased substance use knowledge and skills related knowledge, lower creased normative expectations for smoking and alcohol use and higher self-esteem at post treatment assessment.

Thus, it can be said that preventive education for elementary and primary school children is not very well understood, however the limited studies reviewed here indicate that prevention through life skills education/training can successfully increase the substance use knowledge, knowledge of skills for refusal of drugs, help children develop positive anti drug attitude and also decrease the rate of use of substance among them. Children also learnt to adopt better coping strategies, developed higher self-esteem and positive self image.

2.2.2. Life Skills in Substance Use Prevention and Reduction:

Numerous studies have been done on the impact of life skills intervention for prevention of drugs and alcohol use or reduction for those who are already using the substance. All of them have been successful in imparting drug use knowledge if not report reduction in substance use rate.

In an interesting study by Eiser, Eiser and Claxton-Oldfiled (1988) on 1,325 subjects aged 17-25 years with regard to why people begin to take drugs and how they felt they could best be persuaded to stop, found that majority approved ‘life skills’ approach in place of ‘scare’ approach.

Dusenbury, Botvin and James-Ortiz (1989) reported the findings from their review on Life Skills Training (LST). They found that life skills training
programmes have reduced new cigarette smoking by at least 40% in the first year. And the effects of the programme have been maintained up to two years. It has also been shown to reduce problem drinking and marijuana use. They also report that the revised format to suit the needs of homeless adolescents too was successful in development of life skills and works to create meaningful roles for the adolescents in the environment.

Similar findings were reported by Botvin, Tortu and Baker (1990). They studied the first year data from a large scale smoking prevention study conducted within three geographic regions of New York State. The sample consisted of 5,945 seventh graders from 56 middle/junior high schools. They were randomly assigned to 1. Receive LST with one day teacher training work shop. 2. Receive LST programme with teacher training provided by video tape. 3. Serve as comparison group. Results showed that prevention programme, irrespective of how the teacher was trained, significantly impacted smoking behaviour.

Longitudinal study by Dusenbury and Botvin (1990) showed that the discerning effects of the intervention can be evident up to three years after the intervention. They implemented a life skills training programme for substance abuse prevention among 7th to 9th graders, it was a competence enhancement strategy which contains materials designed to strengthen individual's ability to cope with environment, particularly social influences to engage in substance use, as well as material that is implicitly designed to enhance individual’s ability to generate and identify positive options to substance use. It effectively reduced cigarette smoking, problem drinking and marijuana use.
Raynal and Chen (1997) found that multifaceted drug prevention programme that is based on life skills training is very effective on adolescents. The sample studied was chosen from elementary and junior high schools, which were identified as high risk group by their teachers or school counselor. The intervention focused on practice of skills to effectively handle pressures to use drugs. The sample completed modified drug belief system inventory and a self concept inventory. Progress reports from class teachers were obtained to assess changes in classroom behaviour. Results showed that knowledge about drugs, positive classroom behaviour, self concept and positive attitudes regarding leading a drug free life increased.

Kroger and Reese (2000) found that life skills programme results in delaying of initiation of drug use in adolescents. A total of 675 students belonging to 5th, 6th and 7th grade were distributed to 26 experimental and 26 control groups. A four wave longitudinal, quasi experimental design was applied. Students and teachers completed questionnaires about substance use, implementation and acceptance of programme. Results indicated that there was high level of acceptance of programme by both teachers and students and the programme was successful in delaying the initiation of substance use among boys and girls independent of them being substance use experienced or inexperienced.

Another study on 5th graders found that life skills training resulted in only moderate increase in occasional and regular smokers. Hollederer and Bolsckei (2002) adopted quasi experimental research design which utilized pre test post test design. The experimental group consisted of 644 children and control group consisted
of 631 children. Results showed that during one school year the rate of occasional and regular smokers increased from 2.8% to 4.6% in experimental group and 1.8% to 4.8% in control group. It was interesting to note that the programme had only moderate impact and it was entirely limited to girls. Authors suggest that programmes need to be redesigned to make it more appealing for boys too.

Eisen, Zellman and Murray (2003) evaluated a drug education programme called Lions-Quest ‘Skills for Adolescence (SFA) on seven thousand four hundred and twenty six 6th graders from 34 schools. Two year post tests revealed life time use and recent use of marijuana was lower for students in SFA. They also reported less binge drinking than control group children.

A study in Spain by Fraguela, Martin and Trinanes (2003) revealed that life skills training was indeed successful in reducing the drug consumption. The sample consisted of 1029 secondary school going children who were distributed in three conditions- two experimental and one control group. For one experimental group trained teacher administered the intervention and for the other a member of the research team. The results obtained showed that experimental groups reported lower levels of tobacco and alcohol consumption at the end of one year. However, interestingly, the later evaluations revealed that these effects fade over time, but important differences emerge in the use of other drugs, such as cannabis, tranquilizers or amphetamines.

MacKillop, Ryabchenko and Lisman (2006) sought to evaluate whether community implementation of life skills training would result in reduction in drug and alcohol use. They implemented life skills training on 263 early adolescents
in upstate New York with high degree fidelity. Results indicated that the sample reported significant reduction in alcohol tension reduction expectancies on the alcohol expectancies questionnaire. Exploratory gender analyses revealed that female participants exhibited greater improvement in terms of drug knowledge and anxiety reduction skills than male participants. On the whole, the yielded outcomes were similar to previous clinical trials.

Seal (2006) evaluated the effectiveness of a school health intervention programme using life skills training to reduce tobacco and drug use among Thai high school students. A randomized, experimental, pre test post test comparative design was used. A total of 170 Thai students in grades 7-12 were randomly selected. The control group received only information whereas intervention group received life skills training programme that provided both information and skills, specifically related to drug and tobacco use. Students in the intervention group had statistically significant positive effects regarding knowledge level, attitudes and the development of refusal, decision making and problem solving skills.

Drug use/abuse prevention or reduction is the most commonly researched intervention with fairly good impact. It has been found to influence delay in initiation of drug use, develop anti drug attitudes, develop belief in life style free from drugs, and improve drug use knowledge. The other positive outcomes noted were positive classroom behaviour, adoption of good stress coping strategies, and decrease in rates of smoking.
2.2.3. Life Skills Education/Training for Crime and Violence Prevention:

White (1995) reports on a highly successful violence prevention programme run by organisation ‘The Door- A Centre for Alternatives’ in New York city. The services which include life skills training are targeted at 12-21 yr old youth to deal with consequences of poverty, unemployment, low levels of achievement and hopelessness which are associated with violence.

Chen, Cato and Rainford (1999) evaluated an intervention project targeted at high-risk, middle school African-American youth for drug and crime prevention. The sample consisted of 37 high risk middle school students (aged 11-14 yrs) in Florida. They designed and implemented an educational module called WISE-UP. It consisted of 5 components: 1. Crime prevention 2. Drug education 3. Leisure education 4. Life skills building (decision making, problem solving and conflict resolution) and 5. A tutorial programme. The preliminary data demonstrated that the programme was resulting in the intended results.

Wessels and Monteiro (2006) studied the community based violence prevention programme in Angola between 1998-2001. Following decades of war, Angolan youth are at a risk of continuing cycles of violence and need support in developing positive behaviours and social roles. The intervention programme included life skills, provided peer support and peace education, educated adults about youth, and engaged youth as workers in community development projects. The main results indicated increased adult awareness of the situation, needs of youth, improved youth-adult relations, reduced perceptions of youth as trouble makers, reduced fighting between youth, increased community planning and increased perceptions that
youth make a positive contribution to the community. The results suggest that a dual focus on youth and community development contributes to peace building and disruption of cycles of violence.

Schechtman (2006) investigated the relationship between life skills, classroom climate and self reported levels of victimization. The sample included 97 schools (N=9000 students from 5th and 6th class) in Israel. Results revealed that there was significant relationship between lower levels of self reported victimization with the presence of some life skills and two classroom components: relationship and personal growth.

These studies illustrate that life skill education/training has been successful in crime prevention and violence reduction along with drug consumption reduction and awareness enhancement. It addressed the origins of the problems and helped youth develop necessary skills to deal with tough realities of life by facilitating youth participation in constructive community developmental activities.

2.2.4. Life Skills Education/Training for Career Planning:

Picklesimer, Hooper and Ginter (1998) studied the relationship between life skills development and post high school career plans. They used life skills development inventory-college form to measure the skills possessed by adolescents. Life skills dimensions included interpersonal communication/human relations skill, problem solving, decision making skills, physical fitness, health maintenance skill, and identity development / purpose in life skills. Results showed that adolescents selecting to go to 4 yr colleges/ universities, 2yr colleges and
technical / trade schools differed greatly from each other in terms of life skills dimensions.

Magnuson and Starr (2000) pointed out that career planning is a life skill that needs to be developed from infancy. They believe that it is a life long, spiraling process which includes a series of sub skills.

Recognition of career planning as a life skill by itself, along with the finding that children choosing to go to university or other skilled occupations differ greatly in certain life skills, emphasize that it is just not a health module but has potential for application in wide range of settings including career development.

2.2.5. Life Skills Education/Training for Risk Reduction:

The extent of risk behaviours and the factors influencing the same in youth is well researched; hence many research studies have been done to address these factors. The following studies are examples of the same.

Flay et al (2004) tested the efficacy of two programmes designed to reduce high risk behaviours among inner city African American youth. Two groups: first group received the social development curriculum which promoted social competence skills, second group received school community intervention which clubbed social development curriculum with school wide climate, parent and community components. The third or the control group received Health enhancement curriculum focusing on nutrition, physical activity and general health care. Results showed that boys significantly indulged (in both the groups) less in violent
behaviour, provoking behaviour, school delinquency, drug use, sexual intercourse and increased rate of condom use. There were no significant effects on the girls.

Hartel’s (2005) paper is a comprehensive review of available research concerning the sexual behaviour of adolescents in South Africa. South Africa has a fast growing HIV/AIDS rate, with the highest prevalence among young people (15-24yrs), especially females. The most important conclusion arrived at is, despite the research (however limited) that has been done, there has been no significant change in the rate of infection among adolescents in South Africa. A new generation of behavioural interventions, involving both factual knowledge and life skills to promote behavioural risk reduction is recommended.

Risk reduction in youth by implementing need specific prevention programmes for ‘at-risk youth’ has been widely recommended and used because it is the point of time when lifestyle choices are made and established. They address issues such as academic achievement, drug use, and dietary behaviour, choice of physical activities and leisure activities and also sexual behaviours.

2.2.6. Life Skills Education/Training for Health and Competence Promotion:

Eggert, Thompson and Herting (1994) studied a prevention programme that includes life skills training in the areas of self-esteem, decision making, personal control and interpersonal communication. Results showed that the programme was successful in decreasing school deviance, drug involvement and suicide potential among high risk youth.
Young, Kelly and Denny (1997) assessed the effects over a school term of selected life-skills modules on 328 6th graders who were randomly assigned to experimental and control groups. Analyses indicated that students exposed to select modules reported significant positive changes in psychological variables such as self-esteem, health (drug) attitudes and behaviours.

Shisslak, Crago and Renger (1998) reviewed the literature linking self-esteem to eating disorders in girls. They concluded that prevention strategies used to enhance self-esteem including educational programmes, participation in sports, media literacy training, and body enhancement are discussed and some of the limitations of these methods have been noticed and recommended that use of role models, peer support groups and life skills training should form the basis for future programmes targeting eating disorders.

Bourdon, Tierney and Huba (1998) discuss a model adopted by the organisation 'Health Initiatives for Youth' in San Francisco, California working towards increasing youth sensitivity and responsiveness. The authors point out that many youth do not yet comprehend their risk for HIV infection and its impact. The services are provided through a combination of life skills training, health advocacy training, internships, return-to-work, publications and conferences etc.

Barker, Battle and Cummings (1998) studied 15 low income African American mothers (aged 17-42) of elementary school children. They participated in a six session prevention training that fused education about HIV/AIDS with other life skills and resources. Baseline and three months follow up questionnaire responses
showed that all sample had high level of HIV/AIDS knowledge and 42% of sample expressed increased trust in and resolve to use condom.

Howe (1999) utilized life skills counseling approach on 111 females at private, ethnically diverse, catholic, all girls’ high school. They participated in a ten week group intervention. The sample completed questionnaire on social distance and voluntary inter ethnic interaction. The findings demonstrated that group guidance with life skills orientation is more effective than standard guidance classes in increasing a sense of commonality among sample.

Reifsteck (2001) pointed out that although prevention programmes are proliferating, psychometrically sound programme evaluation methods are not always closely linked to prevention programmes in school settings. Hence the author sought to standardize a instrument that assess and classify risk and also identify protective factors. The author suggests that teaching resilience to adolescents is becoming necessity in multiple contexts; life skills training programmes used in educational settings are only going to increase. Adding an individual risk classification and protective factor assessment instrument such as SEICCA to intervention effort is an excellent way to improve and strengthen the prevention efforts. SEICCA (Socio Emotional Intelligence, Conflict and Cohesion assessment for Adolescents) as developed from a numerous pre existing questionnaires and on a large sample. Reliability analyses indicated good internal consistency (r=0.794) and significant test retest correlation (r=0.881).

McVey, Davis and Tweed (2004) studied the effectiveness of life skills programme designed to improve body image satisfaction and global self-
Esteem, while reducing negative eating attitudes and behaviours and feelings of perfectionism, all of which have been identified as predisposing factors to disordered eating. A total of 258 girls with a mean age of 11.8 years (intervention=182, and control group=76) completed questionnaires before and after one week, the six session school based programme and again 6 and 12 months later. The intervention was successful in improving body image satisfaction, global self-esteem and dieting attitude scores at post intervention only. The gains were not maintained at 12 months follow up. The authors therefore recommend that health promotion programmes should assess its effects on predisposing risk factors.

Magnani, McIntyre and Karim (2005) assessed the impact of exposure to life skills education by youth in Kwa Zulu-Natal province in South Africa on knowledge and behaviours associated with the spread of HIV/AIDS. Sample (N=2222) aged 14-24 yrs were imparted life skills education. Results showed significant, albeit, modest in magnitude, were observed on selected areas of sexual and reproductive health knowledge and perceived condom use efficacy, along with larger effects on condom use at fist and last sex. No consistent effect on age at initiation, secondary abstinence or partnering behaviours was observed among youth. In spite of not very encouraging results authors conclude that life skills programme appears capable of communicating key information and help youth develop skills relevant to reducing HIV risk.

Dilorio, Resnicow and McCarty (2006) tested the efficacy of two interventions for mothers and their adolescents in delaying initiation into sexual intercourse for youth who are not sexually active and encouraging the use of condoms.
among sexually active youth. Two treatment groups: one based on social cognitive theory and the other life skills programme based on problem behaviour theory and one control group were employed. (Total N=582). The primary analyses showed no difference in abstinence rates for adolescents. However, adolescents demonstrated an increase in condom use rate, and the other two groups had higher HIV knowledge. Mothers showed substantial increases over time in comfort talking about sex and self-efficacy.

Lida and Ishnikuma (2006) explored the effects of school life skills on school stressors, stress coping and stress responses on 240 junior high school students. The programme was found to reduce some school stressors. It improved active coping, support seeking, cognitive coping and peer communication skills.

Life skills education/training application has been found useful in endeavours which promote health-physical and mental and also help improve social climate inside and outside the classroom by enhancing a sense of belongingness. It results in improvement of self-esteem, help adopt positive health behaviours and choose life styles that promote advancement.

2.3. Design, Content and Implementation of Life Skills Education/Training:

The design, content and implementation of life skills education curriculum determines its effectiveness. Adolescents benefit to the maximum in programmes that are developmentally and culturally relevant.

Kinsman, Nakiyingi and Kamali (2001) found that large scale implementation of extracurricular AIDS education programme in schools had very little impact. When examined closely with the help of focused group discussion, it
was found that teachers implemented the programme incompletely as they felt ill equipped, feared controversy and shortage of classroom time. Hence the authors recommended that, these kinds of programmes should be implemented on life skills based approach which is infused with the curriculum.

O’Donoghue (2002) evaluated the Zimbabwe’s AIDS action programme for primary and secondary schools during the period 1991-1995, as it was well designed, relatively inexpensive and replicable. The six aspects of the programme were evaluated 1. Programme startup 2. Planning and management 3. Development of syllabi and materials 4. Teacher training 5. Research, monitoring and evaluation 6. Co-ordination. She found that school AIDS programme should stress participatory teaching and learning methods and life skills training curriculum writers and teachers need training and supervision in participatory techniques. Cluster workshops between district and school levels were needed to strengthen the adopted cascade model of teacher training. Systematic research, monitoring, evaluation were essential, including follow-ups of baseline surveys. This study highlights the need for situation analysis before starting the programme, careful planning for implementation, development of syllabi and materials needed for transacting the life skills.

Cuijpers (2002) did a systematic review of about which characteristics determine the effectiveness of drug prevention programmes reviewed. She formulated that programmes with proven efficacy, programmes using interactive delivery methods, use of ‘social influence model’, programmes that promote commitment not
to use and intention not to use in the participants, and adding of life skills component to the programmes may strengthen the effects of the prevention programme.

McVey, Liberman and Voorberg (2003) tried to replicate the study, which reported that school based peer support group programme shown to improve body esteem and global self-esteem and reduce dieting in adolescent girls, on 282 girls in grades 7 and 8, 196 of whom were in control group. They completed self-report questionnaires immediately and three months after the intervention. Contrary to the findings reported in the original study, participation in the 10 session peer support group did not lead to improvements in body esteem or eating attitudes and behaviours beyond what was experienced by the control group. Interestingly, participants of the current intervention group exhibited higher disordered eating scores at base line than those participants in the original study. The authors relate the failure of the intervention to ill matched prevention curriculum with developmental level and symptom profile of students.

A study by Epstein, Botvin and Spoth (2003) focused on rural adolescents and investigated a model of social and cognitive cross-sectional predictors of smoking. Seventh graders (N=1,673) residing in Northern Iowa self reported about smoking, peer smoking norms, adult smoking norms, drug refusal assertiveness, drug refusal techniques, life skills, pro smoking attitudes, risk taking tendency and family management practices. Data was collected in 36 junior high schools. Analysis revealed gender specific effects, family management skills, and risk taking tendency were concurrently related to smoking for girls only. Based on the results of present study and prevention research, it appears that smoking prevention
programme for rural adolescents would benefit from incorporating parent skills training and competence enhancement skills training.

Springer, Sale, and Hermann (2004) studied programme characteristics of large scale study which was successful in reduction in 30 day substance use. The study sample consisted of 10,500 youth at risk for substance use who were from 46 different intervention programmes over a period of five years. They found the programmes that were most effective were those that offered strong behavioural life skills development content, emphasized team building and interpersonal delivery methods, emphasized introspective learning approaches focusing on self reflection, were based on a clearly articulated content and coherent programme theory and provided intense contact with youth. The programmes with these characteristics produced consistent and lasting reductions in substance use.

Vicary, Henry and Bechtel (2004) assessed the life skills training effects for rural middle school females classified as low or high risk for initiation or increased use of substances. Risk domains included socio economic status, family relations and functioning, psychological health and academic performance. The programme did not address these risk factors directly, attempting instead to improve protective factors for participants. The strongest effects were found for high risk group, with some continuing treatment effects after 2 years in substance use and protective skill competencies. Early effects for low risk subjects were lost by the end of second year. The findings underscore the need to chose prevention programme and protective skill competence enhancement more selectively based on risk variables effecting the target population.
Pattman (2005) explored the significance of sexuality in relation to the way boys and girls in South Africa construct their identities. The present study draws from the data collected from 6-18 yr olds in earlier study by UNICEF between 2001-2002. The subjects were asked to elaborate on their interests, pleasures and anxieties and their relations with contemporaries and adults of either sex. He found that it was impossible for them to not allude to sexuality, indicating that it was fundamental to their lives. The author concludes that issues raised regarding female sexuality are extremely pertinent for understanding and working with boys and girls in sex education being introduced in response to HIV/AIDS and life skills education which address sexual and non sexual cultures, pleasures and anxieties of boys and girls.

Ahmed, Flisher and Mathews (2006) examined the effectiveness of teacher training programme aimed at providing teachers with the necessary knowledge and skills to effectively teach a 16 lesson grade 8 (14 year olds) life skills curriculum consisting of exercises on sexual reproductive health, HIV, sexual decision making, abstinence, consequences of sexual activity, safe sex practices, substance abuse and sexual violence. One pre test, one post test and two post post tests were conducted. Findings indicated that teachers reported increased confidence and comfort in teaching the sexuality curriculum. However, many struggled with the transfer of sexual reproductive knowledge and facilitative teaching methods into classroom context. This highlights the need for HIV education to be part of teacher training and also ongoing support and engagement with teachers is needed to encourage alternative teaching practices.
It is evident from the above set of studies that life skills education/training needs careful planning, implementation and regular monitoring. Training the teachers in methods of delivery, provision of necessary material, development of curriculum suitable for prevalent culture, provision of ongoing support for teachers and making necessary modifications in the regular curriculum, addressing the developmental needs of boys and girls in different age groups, and risk factors influencing them should be kept in mind while conducting a prevention programme based on life skills approach.

2.4. Life Skills Education/Training in Other than School Settings:

The acquisition of social competence in the period of early adolescence is being regarded as a pivotal task related to later adolescent and adult healthy adjustment. Experts recommend that practice and research need to focus on new ways of promoting psychosocial competence, especially interventions that place early adolescents in real life situations that provide ample opportunities for incidental learning. Attempts have been made to impart life skills training to children and adolescents in other than school settings, such as sports and adventure clubs, in after school activities etc. The following studies illustrate the effectiveness of these settings in teaching life skills to the young.

McAlevey (1997) found that art therapy to be beneficial for adolescents in transition from foster care to independent living. It proved to be an effective vehicle to teach intangible life skills such as decision making, problem solving, self awareness, goal planning, communication, interpersonal relations, time
management, self control and assertiveness. The sample that underwent this programme was found to be more happy and adaptable.

Sussman, Simon and Clyde (1997) examined the impact of thirty two drug use prevention activities derived from different theoretical sources on 388 adolescents attending continuation schools as they could not attend regular schools. Health educator led activities were consistently rated as better in quality and activities based on life skills methodology as more appealing.

Collingwood, Sunderlin and Reynolds (2000) studied physical training as a mode of teaching life skills for 329 youth. The physical training programme consisted of exercise and educational modules delivered over a twelve week time period that focused on learning values and life skills through exercise. Significant increases were demonstrated in physical activity and self reported data indicated significant decreases in risk factors such as low self concept, poor school attendance, anxiety, and depression and in number of friends who used cigarettes, smokeless tobacco and alcohol. It demonstrated a strong relationship between increased fitness and decreased risk factors and drug usage pattern.

Involving adolescents in community service to enhance their empathy and social responsibility is another model through which competence can be developed. Brunelle (2001) studied the impact of community service on adolescent volunteers’ empathy, social responsibility and concern for others. The investigation was part of a national, multi site golf enrichment programme in which adolescent participants (N=65) assisted adult community leaders in teaching a sports based life skills programme to younger adolescents. Analyses revealed that this experience was
significantly related to empathic concern and social responsibility attributes of social welfare, competence and performance. These findings suggest that the community service experience positively impacted the adolescent volunteer’s sympathy and compassion for others (empathic concern), their sense of concern for society at large, social responsibility and their ability to take action to help others, i.e. social competence and performance.

Life skills give children the tools they need for perceiving or responding to diverse life situations and achieving their personal goals. Participation in quality after school programmes, frequent interaction with competent adults, and participation in programmes using experimental or cooperative learning contribute to children’s social development and academic success. Junge, Manglallan and Raskauskas (2003) examined the development of life skills within a sample of kindergarten through sixth grade students enrolled in 4-H after school activities, which utilize experimental or cooperative learning activities and provides interaction with competent adults. Results of retrospect pre and post surveys indicate that children enrolled in the programme showed life skills gain over time.

Medium of Mass Media was utilized in South Africa to impart life skills education for junior secondary school children. Peltzer and Promtussananon (2003) evaluated the mass media life skills education on 3,150 school children. Results indicated that life skills exposure was positively associated with puberty, body knowledge, HIV knowledge and risk perception, and condom use knowledge, attitude towards people with HIV/AIDS, self-efficacy and delaying sex.
Petitpas, Van Raalte and Cornelius (2004) recognize sports as an important vehicle for life skills development in urban youth. Sports and after school activities have been identified as fertile ground for adolescents to develop initiative and feelings of self-efficacy. Danish, Forneris and Wallace (2005) reviewed literature and found that adolescents self-esteem, identity and feelings of competence are significantly influenced by sports. They further point out that using sport to promote competence in youth has tremendous benefits and risks. Hence, they say that specific environments which sport best contributes to positive youth development, is where schools and psychologists play an important role in sports based programme.

Papacharisis, Goudas and Danish (2005) found that inclusion of life skills training into sports practice may serve as an effective model for learning life skills. They studied the effectiveness of a variant of SUPER (Sports United to Promote Education and Recreation) that examines participants knowledge of life skills, self assessment of their ability to use these skills and performance in sports skill. They found that athletes participating in the intervention programme demonstrate greater knowledge of selected life skills, believed in effective use of life skills due to increased opportunities to practice them and performed better in specific sport skill compared to athletes who did not participate in the programme.

Adventure based practice is an emerging modality of practice for life skills. A variety of factors including having a history of child abuse and neglect, as well as mental health and special education needs have been shown to increase the risk for early adolescents not achieving psychosocial competence. In spite of mixed findings in the past, Tucker (2006) carried out an exploratory study which
hypothesized that participation in nine week adventure based group activity by early adolescents with a history of child abuse and or neglect or have received mental health or special education services, would increase participants’ level of social skills and internal locus of control. No significant changes were observed in social skills in children with history of abuse, but children in special education and mental health services benefited very much. They reported improvement in social skills and locus of control. Therefore the author suggests that future studies need to utilize the methods that will maximize their internal validity through the use of control group, the collection of follow up data, the assessment of treatment integrity, and using the instruments that successfully measure the gains provided by the intervention.

Though life skills training have been successfully provided through school curriculum, attempts have been made to reach out to those adolescents who are unable to attend regular school and provide them with similar health enhancement programmes through other initiatives like sports, adventure based activities, community service and physical training. They too have been found to be successful, indicating the potential that, if well planned many youth can be targeted through this programme and help them develop life skills needed for life.

2.5. Life Skills Education for Special Groups:

Special groups or sections of general population who are at risk of not achieving psychosocial competence needed for well adjusted living due to disadvantages in environment and personal handicaps such as physical or mental illness, racial descent, urban/rural setting, poverty and lack of education. Life skills education specially designed for this population has been proven useful in addressing
their psychosocial needs. The studies mentioned in this section are done on the special / high risk groups listed below.

Vitaro and Dobkin (1996) studied the effects of prevention programme conducted on 121 boys and girls with behaviour problems. They completed a 2 year substance use/abuse prevention programme. 27 boys and 26 girls with behaviour problems and 33 boys and 35 girls with no problems were randomly assigned to prevention programme or to a control group. Results revealed that there was partial impact on proximal measures (i.e self-esteem, influencability, social anxiety, knowledge of cigarette alcohol and Marijuana.). Children with behaviour problems exhibited more assertiveness. Sample in prevention programme gained more knowledge regarding various substances compared to control group. However, there was no difference between prevention and control group children in the rate of use of cigarettes, alcohol and marijuana.

Harrington and Donohew (1997) Implemented and tested the effectiveness of a substance abuse prevention programme on economically disadvantaged high sensation seeking African American teens. The results revealed that sample in experimental group evaluated the programme more positively. Outcome evaluation indicated that significant pre test differences between high and low sensation seekers were neutralized for liquor and marijuana and for attitude towards drugs in the first year.

The effect of culture based life skills curriculum on American Indian adolescents’ self-esteem and locus of control was studied by King (1999). Zuni Indian adolescents in grades 6, 7, and 8 were subjects for pre test post test,
experimental and control design. Students were assigned to two different but related treatments. One received intervention in personal and social responsibility curriculum with American Indian life skills component, second group received only personal and social responsibility curriculum and the third group did not receive any intervention. Both curricula were designed to teach coping skills and socially acceptable behaviour. The former included a culturally sensitive curriculum. Locus of control and self-esteem were the outcomes studied. The duration of the intervention was 9 weeks, with three personal and social responsibility classes per week. The first group received additional instruction on culturally based life skills component twice per week. The results indicate that males in the first group, who had higher self-esteem than females in pre test, reported significantly higher self-esteem than the females in post testing. However there was insignificant shift in the locus of control in both males and females.

O’Hearn (1999) studied the effect of training in goal setting to teach life skills for at-risk urban youth. He evaluated the school-based intervention called going for the goal, designed by Danish and his colleagues to teach life skills for at-risk urban youth. The nine week programme was administered on middle school students. Results demonstrated gains in knowledge of skills being taught; attainment of goals set during the programme and improvement in Means and Ends Problem Solving skills (MEPS). O,'Hearn and Gatz (2002) replicated the study on similar lines and obtained the same results.

Hay, Byrne and Butler (2000) examined the effectiveness of a intervention programme designed to enhance the self concept and motivation of
underachieving gifted secondary school students. Twenty male and female students were randomly assigned to experimental and control group. The treatment group underwent a programme called ABLE (Attribution, Behaviour and Life Skills Education). It incorporated problem solving and conflict resolution. The adolescents in the study made significant improvements in areas of general self concept, physical appearance self concept and total self concept. It was noted that teaching conflict resolution and problem solving had beneficial effects on self concept.

Reiter (2001) conducted a group based educational programme on life skills, which was implemented with eleven participants (17-18 years) with moderate learning difficulties for nine months. The aim of the programme was to enhance the autonomy by means of group cohesion and teaching of social skills. Teaching was based on the internalization cycle model. The analysis of group processes was completed by means of content analysis of teachers’ detailed reports. Students outcome were computed on three questionnaires that were administered at the beginning and end of the programme. They measured the quality of life, social development and self concept. Significant changes occurred in areas of social integration, as the participants expressed more positive feeling concerning friends. Significant improvements occurred in areas of social skills, self help, socialization, communication and occupation. However, no changes occurred in the self concept, it was high and positive at the beginning and at the end of the programme.

Lee and Wright (2001) studied the effects of emotional awareness programme for pupils with moderate learning difficulties. In this study a seven week emotional awareness project was designed for seven pupils (12-13yrs) presenting
with emotional and behavioural difficulties. The purpose of the project was to identify whether an emotional awareness programme would lead to an increase in the pupils awareness and understanding their own emotions as well as others. This project demonstrated that an emotional awareness programme can be adapted creatively for pupils with special educational and learning needs without involving expensive resources, and can train pupil in life skills that can be applied both in and out of class room.

Thurston (2002) reported the results of a life skills management programme called Survival skills for youth on ten groups (N=114) of at-risk rural youth in Tennessee and Missouri. Pre and post evaluations of knowledge of life management concepts, self-esteem and social skills show that survival skills for youth to be effective in changing the attitudes and behaviours of rural youth.

There has been an increasing call for and development of culturally appropriate substance prevention /intervention for ethnic minorities in schools and communities. Marlatt, Larimer and Mail (2003) reported on a culturally relevant life skills programme to prevent and reduce alcohol misuse among urban American Indian and Alaska native communities. The programme called ‘Journeys of circle’ utilized innovative programmes with strong emphasis on historic and cultural traditions. The participants could greatly identify themselves with the programme and reported less alcohol use. Since culturally relevant programmes address the specific psychosocial problems, the acceptance rate is better. The ethos of culture, values and traditions add up to its appeal.
Rhode, Seeley, and Kaufman (2006) studied 114 depressed adolescents recruited from a juvenile justice centre. They were randomized to a cognitive behavioural treatment (CBT) condition or a life skills training group. Analyses revealed that CBT resulted in faster recovery relative to life skills training specifically among adolescents of white ethnicity. It indicates that life skills training too had desired effects albeit more time consumed.

Christian and D'Auria (2006) tested the effectiveness of an intervention to improve psychosocial adjustment, functional and physiologic health in children (8-12 years) with Cystic Fibrosis. Due to improved survival of children with this progressively debilitating illness, they need to balance physiologic and functional health with psychological and developmental needs before downward trajectory intensifies. A sample of 116 children were assigned to experimental and control group. Repeated measure at 3, 6, and 9 months were conducted. They received individual tailored intervention along with structured group activities. Results showed that children in experimental group demonstrated decreased perceived impact of illness and loneliness. At 9 months the improvements were maintained. Authors conclude that developmentally appropriate problem solving and social skills intervention has promise for decreasing the social consequences of chronic illness in children's lives.

Long, Down and Gillette (2006) conducted a naturalistic collective study on American Indian communities and found that youth are encouraged interdependence and continued connection with family and parents even after transition into adulthood. Therefore the authors say, since their culture has significant
influence on youth identity development, the relevant life skills needed in adolescence also differ.

Thus, Life skills training interventions if tailored to the needs of special groups, such as ethnic minorities, children suffering from mental and physical disorders, children living in foster care, those living in adverse conditions have been found to be successful.

2.6. Life Skills Education/Training in Combination with Other Intervention Programmes:

In the west, to improve the impact of the programme, other intervention have been added to existing life skills training programme or life skills components were added to the existing programmes. The following studies illustrate the same.

Wurzbacher, Evans and Moore (1991) studied the effects of life skills programme that has been coupled with basic academic and computer literacy skills. The sample consisted of 58 female and 56 male prostitution involved adolescents (aged 13-19 yrs) self assigned into one of the three groups: 1. Alternative street school attenders 2. Those who are unable to attend the school and 3. School refusers. Street school consisted of an open enrollment classroom providing basic academic skills, computer literacy, life skills and general equivalency diploma training. Data was collected at intake for Reynolds Adolescent Depression scale, a self-esteem scale, the quality of school life scale and self reported weekly prostitution events. Those who attended the school improved significantly on all measures, showing less depression, improved school sentiment, improved self-esteem and reduced prostitution activity
after two months of street school. Whereas, refusers were significantly more depressed, had lower self-esteem and had lower school sentiment, and specifically among males, more self reported prostitution activity.

In another study by Little, Morgan and White,(1991) life skills education was coupled with psychodrama in a community based programme for prevention and treatment of child abuse. The programme was designed in such a way that it addressed the intrapsychic, interpersonal and behavioural skill deficits. Evaluation of the programme after one year, with twenty five pre school children and their mothers demonstrated warm exchange of feelings with their teachers and peers and became less dependent on adults by learning self help skills and following routine.

Vincent and Guinn (2001) coupled life skills education with behaviour management and cultural appreciation for Hispanic children aged 7-12 years living in colonia (colonias are defined as unincorporated subdivisions with inadequate infrastructure like no surface drainage, substandard housing to support their residents.). The intervention they imparted was based on components 1. Communication and behaviour management. 2. Cultural appreciation and 3. Life skills training. The constructs of self-esteem and health locus of control were used as indices to compare differences between intervention participants and non participants. Discriminate analysis revealed that powerful ‘others’ locus of control, and age distinguished participants from non participants. Results showed that the intervention positively influenced self-esteem and acceptance of responsibility of one’s own health.
Effect of family school community intervention on disruptive students was studied by Carpenter-Aeby and Aeby (2001). This study is based on the research evidence that students misbehaviour results from unmet physical, emotional or social needs. These students who interfere with learning of others may need additional services to enable them to be successful in school. The present study examined the psychosocial variables such as self-esteem, depression, locus of control and life skills using pre test - post test design with comparison to control group to measure changes at post assignment (intervention) as a way of evaluating the effectiveness of the programme. In addition, educational variables like absences, grades, school status were also examined. Results showed that participants reported significant improvements in self-esteem, life skills, school attendance and grade point average upon successful completion of intervention compared to control group. This study too indicates that family and community involvement will strengthen the intervention.

A large study by Spoth, Redmond and Trudeau (2002) compared the effects of life skills training and life skills training coupled with family strengthening programme. They evaluated the substance initiation effect between the two. Thirty six rural schools were randomly assigned to one of the three conditions 1. Class room based life skills training and strengthening families programme for parents and children between 10-14 yrs. 2. Life skills training and 3. A control condition. Outcomes were examined one year after the intervention, using a Substance Initiation Index (SII) which measures life time use of alcohol, cigarettes and marijuana and rates of use of each individual substance. Analysis showed that planned intervention-control contrasts had significant effects for both the combined and life skills training
only interventions on SII and on marijuana initiation. However, relative reduction rates for alcohol initiation were significant for combined intervention (30%) and only (4%) for the life skills training. This study indicates that family involvement maximizes the impact.

Tuttle, Campbell-Heider and Tamala (2006) tested the addition of a cognitive behavioural skills building component called Positive Adolescent Life Skills (PALS) to an existing intervention (Teen club) for urban adolescents to enhance resiliency. Sixteen adolescents aged 12 to 16 years (10 boys and 6 girls) attending secondary school were randomly assigned to teen club or teen club plus (PALS) for a duration of thirty weeks. Problem Oriented Screening Instrument for Teenagers (POSIT) subscales score were measured at baseline and at the completion of the programme. Results indicated that between group differences in the POSIT subscales were significantly different. Group interviews conducted at the conclusion of the intervention revealed that participants found the PALS intervention to be useful and relevant. However, authors suggest replication of the programme on a larger sample.

As evident from the above studies, life skills training have been successfully coupled with various intervention programmes such as cognitive behaviour therapy, family intervention or any other existing interventions. They were complimentary to each other and strengthened the outcomes.
2.7. Life Skills Education/Training In Comparison With Other Intervention Programmes:

Life skills education or training has not only been effectively used as prevention strategy, but also as mode of treatment by some researchers for certain mental illnesses. The studies in this section illustrate the same.

Fernandez and Larimer (1990) studied 17 female patients (aged 16-40yrs) diagnosed with bulimia nervosa. They were divided into three groups where they underwent short term group treatment programmes. First group underwent exposure with response prevention treatment, second group underwent life skills training and third group had psychodynamic group interactions as its treatment modality. Results indicated that there were no significant differences between groups. Pre test vs. post test scores on a battery of tests demonstrated improved control over eating behaviour and lowered anxiety and depression. This indicates that life skills’ training was as effective as other treatment methods studied.

Friedman and Utada (1992) reported a study in which life skills training has been compared with a programme combining Anti Violence (AV) and Value Clarification (VC). Sixty two adolescent substance users were randomly assigned to both the programmes. The sample was evaluated only at post intervention. Intervention effects were determined for the total sample in addition to between group comparative analyses. Both the groups reported several improvements in behaviour and attitude. However, the group with AV-VC intervention fared better than life skills training, accounting for all the significant result.
Jones, Corbin and Sheehey (1995) studied the effects of two different programmes, one containing life skills component and other containing only information. The first group was trained in drug refusal skills and other imparted drug related information. The former group was taught drug knowledge, assertiveness skills, decision making skills, elaborative rehearsals and specific drug refusal skills. The latter were taught all the same information except elaborative rehearsal skills in place of which they received training in self-esteem. Children in both the groups completed the prevention of child drug use assessment instrument, life skills training student’s questionnaire, and drug refusal behavioural situations scale. Results showed that sample from both the groups show significant improvement in drug knowledge. However, the group with rehearsal skills reported significant improvement in the occurrence of behavioural skills and rehearsal skills, while general information sample improved most on the measure of self-esteem and general knowledge. Hence, intervention/prevention programmes that enable skill development rather than only knowledge enhancement are much more effective.

In another study conducted by Nemire, Beil and Swan, (1999) prevention education materials were provided through virtual environment and through traditional method (trained life skills educator providing the intervention), and these were evaluated after a period of 8 weeks. In virtual environment group intervention was provided through computers with audio visual aids and other electronic gadgets i.e there was no involvement of life skills educator. The sample consisted of seventy two 7th grade students who were randomly assigned to the said groups. Questionnaires utilized measured sample’s smoking knowledge, attitudes and
behaviour. Pre exposure data showed no significant differences between groups. Post exposure data indicated improvements in attitudes in both the groups. In addition virtual environment group showed more accurate information concerning peer and adult cigarette use and more likelihood of using coping and refusal skills. Thus, Prevention through virtual environment showed more impact than the traditional method, i.e. computers are as efficient as or even more effective than human life skill trainers/educators.

Aseltine, Dupre and Lamlein (2000) carried out a study on intergenerational approach to drug and alcohol prevention through the comparison of effects of programmes such as mentoring, community service and school based life skills curriculum. Approximately four hundred 6th grade students took part in the evaluation over a period of three years. They were assigned randomly to the aforementioned groups. Results indicated that mentoring is associated with lower levels of problem behaviour and substance use and higher levels of self confidence, self control, cooperation and attachment both to school and family. Interestingly, in contrast very few positive effects of the life skills curriculum or community service were found.

The efficacy of Adolescent Coping With Depression (CWD-A) - a cognitive behavioural intervention was studied in comparison to life skills training. Rhode, Clark and Mace, (2004) studied 93 non incarcerated (aged 13-17yrs) depressed adolescents with co morbid conduct disorders were recruited and randomly assigned to CWD-A and life skills training programme. Participants were assessed post treatment and 6 and 12 months follow up. Results revealed that major depressive
disorder recovery rates post treatment were greater in CWD-A (39%) compared to life skills training (19%). CWD-A participants reported greater reductions in depression and improved social functioning post treatment. However, surprisingly group differences in major depressive disorder recovery rates at 6 and 12 month follow up were not significant, as were with conduct disorders both at post treatment and during follow up. Thus, it shows that in the long run life skills training are as efficacious as cognitive behavioural group intervention.

Finally, Swisher, Smith and Vicary (2004) compared the cost effectiveness of life skills curriculum to a life skills curriculum with infusion approach and to control schools. Male and female seventh graders from nine rural schools (3 in each group) were followed for two years. Analysis indicated that after one year, significant effects were observed only for females on alcohol, marijuana and inhalant use in life skills training condition and for tobacco and alcohol and marijuana use for I-LST females. After two years only I-LST affected female smoking. Thus both the programmes almost equally effective after one year, but LST was more cost effective. However, the authors opine that the I-LST is the only programme with greater impact; but it is more cost effective.

It is clear from the above studies that life skills training when compared with other interventions or treatment modalities have some times proven to be as effective. It indicates the potential of the approach and its application can be wide ranging.
2.8. Other Effects of Life Skills Education/Training:

The literature reveals a few studies which report positive impact of experience of imparting life skills education/ training on the teacher himself/herself. The following illustrates the same.

Saenz and Mario (2001) studied the efficacy of drug prevention programme based on promoting healthy life styles in 2960 male and female 4th-6th grade students and 94 male and female adult teachers in Costa Rica. The programme focused on development of self-esteem, life skills, drug information and healthy habits. The results indicated that teachers found the training contributed to their own personal and social development and improved their relation with their students and as desired the intervention programme improved the social skills of the students.

Similarly O’Hearn and Gatz (2002) evaluated a life skills programme for at risk urban adolescents. The life skills training was imparted to the students through peer education i.e 46 high school student leaders trained for this purpose. Results indicated that student leaders showed significant increase in the knowledge of life skills.

The observation that teaching life skills experience as a positive and beneficial for the educator him or her self is an interesting one. Very few studies have documented this finding, but it is conclusive.

2.9. Ineffectiveness of Life Skills Education/Training:

The researcher while reviewing the literature found that some studies reported ineffectiveness of life skills education/ training. These are studies that throw
light upon flaws in designing, implementation and evaluation of life skills programmes. The following studies illustrate the same.

McVey and Davis (2002) found that life skills based programme was ineffective in prevention of eating problems in young adolescent girls. They studied the effectiveness of a programme designed to promote body image satisfaction in 263 young adolescent girls in grade 6, half of whom were in control group. The evaluation was carried out over a period of one year. The samples completed questionnaires that assessed body image satisfaction and eating problems before and after the prevention programme, and 6 months and 12 months later too. The six session prevention programme has 2 principal components 1. Media literacy about dangers associated with idealization of thinness and 2. The promotion of life skills including self-esteem enhancement strategies, stress management techniques and peer relation skills. Results indicate that programme had no effect. Both the groups revealed similar trend of significant increase in body image satisfaction and decrease in eating problems.

Hanewinkle and Abhauer (2004) report that life skills training for prevention of smoking has a weak effect on the adolescents. They studied 1024 adolescents aged between 11-12yrs from across four European nations-Australia, Denmark, Luxembourg and Germany in experimental group and a matched 834 pupils served as control group who did not receive any intervention. The intervention based on life skill approach was provided for the experimental group over a period of 4 months in 21 sessions by the trained teacher. The questionnaires were administered before the commencement of the programme and 15 months after the commencement of the programme. Results showed that though teachers and pupils reported high
levels of satisfaction with the programme and the material, programme had no differential effect on current smoking (4 week prevalence). It showed a weak effect on life time smoking prevalence and experimental smoking. No effect was found on susceptibility to smoking on never smokers, attitudes towards smoking and perceived positive consequences of smoking.

Bejarano, Ugalde and Morales (2005) carried out a study which evaluated the life skills training programme for the purpose of prevention education for Costa Rican adolescents. They adopted a quasi-experimental design which utilized pre test –post test design for the experimental and control group. The results were interesting as both the experimental and control group showed significant improvement in self-esteem, self management, stress management, peer pressure and communication. The authors interpret this as a result of natural growth. They also felt that sample in control group might have been subjected to additional preventive influences which were outside their control. They recommended that evaluation programme should be long drawn to ascertain the possible long term effects.

Walker, Gutierrez and Torres (2006) assessed the effects on condom use and other sexual behaviour of an HIV prevention programme at school level. The researchers adopted cluster randomized controlled trial. A sample of 10,954 first year high school students from 40 public high schools formed the sample of this study. They were assigned randomly to one of three groups- 1st group had HIV prevention course that promoted condom use, 2nd group- HIV prevention course with emergency contraception as back up and 3rd group had existing sex education. The intervention that was provided for the first group consisted of 30 hours course on HIV prevention
and life skills. The second group received two extra hours of education and emergency contraception. The outcomes measured were condom use, self-reported sexual activity, knowledge and attitude about HIV and emergency contraception. Data was collected in the form of self-administered questionnaires at baseline, four months and 16 months. Results showed that intervention did not affect condom use or sexual activity as both the groups did not differ significantly. Only improvement reported was improvement in knowledge of HIV, contraception and condom use.

The ineffectiveness of life skills training intervention has been variously interpreted. The reasons are, poor research design, unappealing methods of delivery, not matched to the needs of the target group and difficulties in implementation.