

Study of Academic Resilience of Urban High School Indian Students and its Impact on their Scholastic Performance

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Abstract: *Adolescents in the urban Indian society face a multitude of socio-emotional issues which impact their scholastic performance. While some students cope with the adversities with fortitude, many students do not have the necessary coping skills to overcome adversities. The ability to overcome adversities without impacting the academic performance is academic resilience . This study is carried out in a sample of high school students studying in Public school and come from low socio-economic background. This profile of students is highly susceptible to stressful conditions coupled with low societal support mechanisms to overcome them. The resilience and scholastic performance are measured using appropriate inventories backed by secondary data on their school marks. The data is subjected to correlation analysis and hypothesis testing.*

The study reveals that there is a significant correlation between level of resilience and the scholastic performance of students after eliminating the outliers. A morphological analysis of the outliers reveals the impact of environmental protective factors and innate scholastic abilities on their scholastic performance. There is no significant difference between girls and boys with respect their scholastic abilities as well as their resilience attributes. The study reveals that early adolescents are less resilient compared to late adolescents. The findings of the study has good potential to develop appropriate individual and group counseling interventions to enhance the resilience capabilities & scholastic skills which in turn impact their scholastic performance. Scholastic performance is a key determinant in career choice options to a student in urban India. The output of this research will aid in career formulation choices for the students early in their academic path.

1. Introduction

The vitality of a society depends on the psychological health of its members . History

shows that progress in science , arts and literature in a society takes place in a realm of psychosomatic well being. Inventions and discoveries hinge on the scholastic achievement of the active population. While a regime of peace and stability is essential for scholastic pursuits, the ability of the societal members to absorb sporadic and sustained distress enhances the potential of the civilization.

The future of a country depends on the scholastic and resilient potential of the adolescent population. The adolescent of today become the harbinger of progress tomorrow. It is essential that attention is provided to the psychological health of adolescents of a society to ensure its future well being.

Society is facing slow but steady changes in its structure, relationships and processes. The electronic age while bringing people close to each other is possibly spreading minds and hearts away. The societal patronage and support which was available in the last decade has given way to individualistic competitive forces. The breakdown of the joint family system and the reduction in inter and intra family interactions pose a grave risk to the adolescent in their ability to overcome stressful situations. The competitive world is putting additional pressure on academic performance since academic scores open possible doors for further professional pursuits and realization of goals and ambitions.

A resilient society is the hallmark of a progressive society. History is replete with instances where the society has warded off natural calamities, inter-cine warfare and other man made holocausts and rebounded back to cultural and economic progress based on the resilience of its youth.

2. Background

India has a strong demographic advantage as compared to other developed and developing countries. Across the world, the average age of the

Population is increasing. The United States, European Union and Japan have an ageing population impacting their economic progress. China too, which was the fastest growing economy has slowed down on account of the increase in the average age of the population due to the one child norm imposed by the Government of the land. By contrast, India has a young population. The economic survey (2017) reveals that the average age of India is 34 years and the trend is going to go down for the coming two decades. 25 % of the population is below the age of 18. This means that there will be more number of adolescents in the country in the coming years who form the potential to take the country forward.

While demographic profile provides an opportunity, it is no guarantee for socio-economic progress. Progress hinges on the psychological health of the population and how effectively they are able to follow professional and skill based pursuits leading to societal development.

The Indian society is subtly but progressively changing keeping in tune with the globalization of society. Economic and social liberalization has been associated with a significant change in the attitude of adolescents as well as their parents and families (Goyal Brothers 2012). More number of youth and families are moving from villages to cities in search of education, vocation and livelihood. Urbanisation is increasing the competition for scarce resources. In the ever increasing struggle for existence, it is “not just the strongest or the biggest that survives but that which adapts well to the environment” (Charles Darwin). While Darwin referred to the physical ability to win the race for survival, in the present context, it refers to the ability of the youth to perform well in the academics and adapt to the growing demands and pressures of the urban society.

Another feature of urbanization is the breakdown of the joint family system. Communication and transport advancement coupled with economic and social compulsions have led to splitting of the joint family and migration from the native places to cities as nuclear families with different aspiration levels. Consequently, the cushion of resilience afforded by the joint family and close knit society is no longer available to today’s generation.

Easy access to communication channel and media while a potent tool for education, learning and capability building also is a distraction, if not regulated properly. The adolescent is suddenly exposed to a lot of data and

information more than what they can perceive, analyse and absorb. It has the potential to distract adolescents from the wholesome pursuit of academic learning and growth.

This paper analyses the constructs of adolescent well being in terms of resilience and scholastic competence in the Urban Indian context. The outcome of the paper provides data for enhancing resilience and coping skills in high risk adolescents.

3. Objectives

This paper intends to analyse various attributes impacting scholastic performance of urban adolescent in the background of the context given above. The objective is to draw a framework for appropriate counseling interventions to develop coping skills.

The objectives of the study are as under :

1. To analyse various factors which impact scholastic performance of high school students.
2. To carry out a sampling survey of scholastic abilities of urban adolescent from low socio-economic background.
3. To study the levels of resilience of such students in terms of risk factors and protective factors.
4. To analyse the impact of resilience on the scholastic performance of high school students.
5. To study whether gender has any influence on the resilience attributes in adolescents.
6. To analyse the evolution of resilient coping skills with age in adolescents.
7. To arrive at appropriate counseling interventions for improving scholastic performance by enhancing resilience and scholastic skills.

4. Literature survey

4.1. Adolescence

Adolescence is derived from the Latin word “adolescere” which means to grow up. According to the World Health Organisation (WHO), adolescence is a transitional stage of

physical and psychological development from childhood to adulthood. Adolescence is associated with physiological development, cognitive development, psychological and psychosocial development.

The first formal study of adolescence psychology was carried out by Stanley Hall who viewed adolescence primarily as a time of internal turmoil and upheaval (Stanley Hall, 1904). This theory was based on Darwin's theory of evolution and Freud's psychodynamic theory. The life course perspective of adolescent development (Glen Elder, 1960) introduces the concept that adolescent development is shaped by an interconnected network of relationships and the choices and actions that an individual makes within the context of the social network.

A lot of research has been carried out on various topics related to adolescents including chronic illness, depression, drug abuse, eating disorders and scholastic performance.(Srihari 2015, Moffitt 1993). These papers are context specific and the course and output of the research is valid for particular societies or sections and can rarely be generalized. The stratification can be ethnicity, geographical locations, country specific or time specific.

Within the country as well, there is wide diversity in the geography and socio-economic strata. Adolescence is both gender as well as class based in India (TS Saraswati 1999). The development of adolescence traits is influenced by processes both in the family and in the school (Thapan 2001). Hence the findings of the papers have to be validated for the specific focus group being studied. This research focuses on urban adolescents from low socio-economic background pursuing high school studies in public schools.

4.2. Scholastic Performance

Scholastic performance of a student refers to the grades or scores achieved in either the curriculum based tests or in scholastic assessment inventories(Saraswati, Rao & Hegde,2009).

Scholastic competence refers to the intellectual behavior and manifestation activities that a student has developed through schooling and training (Savitha Mishra, 2013). The scholastic competence manifests in scholastic performance. Christine De Baca (2010) identifies three attributes of scholastic competence : scholastic aptitude, scholastic skills and socio-emotional learning.

Scholastic aptitude is an innate natural talent latent or potent in an individual which characterizes him to perform certain kind of things (Freeman,1971). Mark Snyderman (1987) refer to it as a genetically predisposed attribute characterized by mental speed, memory, sensory acuity, capacity to acquire knowledge and achievement motivation. It is the mental ability to handle multiple information and process them independently (Caroll, 1993, Thurston,1998, Guilford,1967).

Scholastic skills on the other hand is a systematically learned process of analyzing, interpreting and decoding data posed in academic and qualifying tests. The Business dictionary defines (scholastic) skills as an ability and capacity acquired through deliberate, systematic and sustained effort to carry out a complex task or resolve a problem. In contrast to scholastic aptitude which is a genetic pre-disposition, scholastic skills are acquired through focuses training and practice.

Various researches have brought out that scholastic aptitudes are not truly reflected in the scholastic performance scores of various standardized tests. Warner Slack (1980) argues that the results on scholastic aptitude test scores are affected by skill training and tuitions and hence cannot be taken as a true reflection of one's aptitudes.

Steve Brown (1989) studied the moderating impact of self belief and other socio-emotional factors on the academic achievement of students. Luisa Rojas (2015) brought out various individual and environmental risk and protective factors influencing scholastic performance beyond intrinsic aptitudes and learnt skills. Carlos Valiente (2012) has clearly brought out the linkage between students' emotions and academic performance. Hence, it can be predicted that socio-emotional learning can augment and enhance the influence of scholastic aptitude and scholastic skills on the scholastic performance of students. This paper explores the influence of resilience as a socio- emotional trait on the scholastic performance of adolescents prone to social risk factors.

4.3. Resilience

Resilience refers to the capacity of individuals to cope with stress and catastrophe (Annalakshmi Narayanan,2008). Resilience is the ability to thrive, mature and increase competence in the face of adverse circumstances. These may include risk factors and absence of environment protective factors. It is a stable personality trait

that protects individuals from negative effects of risk and adversity (Hollister Wagner, 2001; Howard & Johnson, 2000; Walsh, 2002). This personality trait evolves as a dynamic process whereby the individual shows adaptive action (Schoon, 2006) to overcome adversities and gains competence to face future challenges (Chung, 2008). Resilience can be acquired either by experiences or by structured counseling.

According to Smith & Carlson (1997), the adolescents are more susceptible to stressful events and perceive some events as more stressful than an adult may perceive. Adolescence is considered as a period of vulnerability for most individuals since they are exposed to and partake in high risk behavior (Nancy Ahern, 1996). Those who are less resilient may turn to negative beliefs about themselves to cope to competitive pressures (Smokowski, 1999).

Referring to the ability to succeed in school despite adverse conditions, academic resilience includes components such as confidence, a sense of well being, motivation, an ability to set goals, relationships and stress management (Christine De Baca, 2010). De Baca goes on to show the close relationship between resilience and academic success and that resilience can in fact be taught to school students. Learning problem solving skills is a significant contributor to an individual's socio-emotional wellbeing (Pearson & Hall, 2006). This paper examines the extent to which socio-emotional wellbeing contributes to scholastic performance of adolescents.

M Rutter (1987) defines two components of Academic resilience in children and adolescents : The individual factors and the environmental factors. The individual factors include optimism, self esteem, direction, determination, perseverance and problem solving skills. These factors can be enhanced in an individual after suitable identification through inventory and structured counseling process.

The environmental factors nevertheless are beyond the reasonable control of the individual . These comprise both environmental risk factors and environmental protective factors. The environmental risk factors include poverty, family dysfunction, lack of social support, gender specific prohibitions etc. The environmental protective factors include parental skills, role models, respectful communication, family support and guidance etc., These environmental protective factors can be leveraged by the individual to

enhance his resilience (Priyavadhan Shastri, 2013).

Andrew Martin and Herbert Marsh (2006) have examined the psychological correlates of academic resilience on a sample of Australian High school students to evolve a model to leverage resilience. Chung (2008) identified the constructs of resilience in low income Latino youth as self desire and family support. Based on the study of low socio-economic college going students in rural India, Dr. Annalakshmi Narayanan (2015) has developed focused intervention programs to improve their academic resilience.

Sreehari & Radhakrishnan Nair (2015) have studied the age and gender difference on resilience among high school students and found that there was no gender or age related difference in the score of resilience. However the study by Teresa et al (2003) of American urban high school students brought out the role of ethnicity, gender and age on the resilience and academic performance. Independent studies by Scott Plunkett (2008) and Rosemary Gonzales (1997) on Mexican origin high school students revealed varied environmental protective factors between male and female students.

The literature survey reveals that the environmental factors like ethnicity, socio-economic status, geography, class, clan and period of study impact the resilience framework of the individual. Accordingly, results of studies on resilience effect on scholastic performance vary based on the context of the study and no generalisations can be made.

This paper seeks to understand the influence of resilience on scholastic performance of urban adolescents from low socio-economic background studying in public schools in urban Indian context. The sample is drawn from Bangalore, a typical south Indian urbanized city. The influence of age and gender will also be studied.

5. Methodology

5.1. Sample selection

A sample of 125 students both male and female as detailed below was drawn from a Public school in North Bangalore, India. All students were drawn from the same school to eliminate extraneous external factors impacting the scores.

The students were from low socio-economic background but otherwise no physical or psychological manifest problems. This profile of students is highly susceptible to stressful conditions coupled with low societal support mechanisms to overcome the distress. The students were studying in Class VIII, IX and X standards and belonged to the age group 12– 17 years . The distribution is as below :

Table 1. Sample distribution

	VIII	IX	X	Total
Male	21	22	20	63
Female	26	18	18	62
Total	47	40	38	125

The purpose of the study was explained to the Management of the school and an introductory session was conducted to the students. The objective of the introductory session was to develop a two way communication channel, openness and trust with the participants so that the respondents are clear of the exercise.

5.2. Measure of Resilience

In order to capture the resilience parameters, the Bharatiyar University Resilience Scale (BURS) developed by Dr. Annalakshmi Narayanan (2009) was utilized. This scale comprises of 30 questions covering the following aspects of resilience :

- a) Reaction to negative events
- b) Time to bounce back
- c) Response to risk factors
- d) Perception of past negative events
- e) Defining problems
- f) Confidence in coping with future
- g) Openness to experience

The BURS has a high biserial correlation with Friborg resilience scale (0.349) and Bells adjustment scale (0.382). The Cronbach Alpha reliability coefficient assessed on a data of 577 students was 0.876. It is designed and tested for the Indian settings and hence is appropriate for utilization for this study.

The students answer on a five point Likert scale. The evaluation is carried out by normalizing the responses of the 10 questions with inverted Likert scale and totaling the scores of the 30 responses of each respondent. The maximum possible value of a subject on this scale is 150 and the minimum is 30. The total value gives the composite score of resilience of the student along the seven attributes.

5.3. Measure of scholastic performance

Scholastic performance is a combination of aptitude, ability and the mental disposition at the time of taking the scholastic test. Aptitude is an intrinsic natural talent innate in a person. Ability is a talent which is nurtured through extrinsic training or education. The mental disposition is influenced by both environmental factors and the internal response mechanism of the individual.

David’s Battery of Differential Abilities (DBDA-revised version) is used to measure scholastic performance. DBDA is a battery of short tests used to objectively assess a person’s abilities under the conditions of the assessment. The split half reliability coefficient of the test is between 0.69 and 0.95 and it correlates well with academic achievement and General intelligence tests. The abilities identified for measurement are Verbal ability, numerical ability and reasoning ability. The composite scores on the three abilities are taken for analysis.

In addition to the composite scores on the DBDA test, the marks scores in the internal tests in the various subjects are also collated as secondary data for correlation.

6. Results

6.1. Relation between scholastic performance and resilience

The scores on the BURS test and the DBDA test are plotted as a scatter diagram. The plot follows a Normal distribution with a concentration of samples around the mean line and a scatter at the periphery. The outlier test is carried out to identify the samples at the tail of the normal distribution. Seven students are identified as outliers. A separate phenomenological examination is carried out on the outliers.

After removing the outliers, the data is subjected to Pearson’s Product moment coefficient test. The correlation between resilience and scholastic performance is 0.688.

Table 2. Computation of Pearson’s Product Moment Correlation coefficient

ΣX	ΣY	ΣXY	ΣX^2	ΣY^2	Pearsons Correlation coefficient	N
11113	676	68306	1138059	4540	0.6877	125

$$C = \frac{n \sum XY - \sum X \sum Y}{\text{SQRT}((n \sum X^2 - (\sum X)^2) * (n \sum Y^2 - (\sum Y)^2))}$$

$$= 0.6877$$

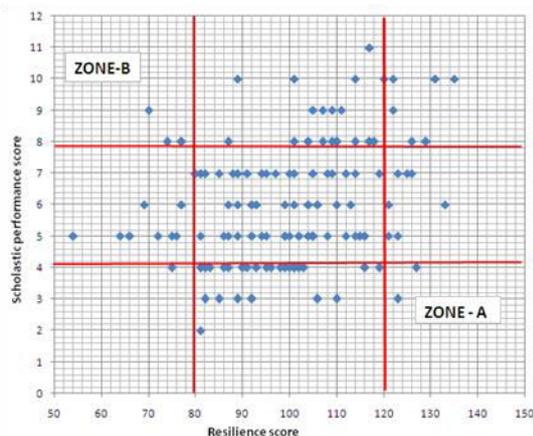


Fig 6.1 Scatter diagram of Resilience and Scholastic performance scores

The correlation coefficient when computed individually for boys and girls show a coefficient of 0.61 for boys and 0.689 for girls which shows that across gender, the scholastic performance is highly correlated to resilience values.

Of the outliers identified for phenomenological examination, three students performed high on scholastic performance test while having very poor resilience scores. Each of the students was interviewed separately to identify the causes of this phenomenon. The students had good scholastic aptitude innate in them which enabled them to perform better inspite of fragility in their response to distress. They were brought up in a protective environment and had well educated parents. The secondary data of school records corroborated the conclusion.

Two students had high resilience scores yet performed poorly in the scholastic performance tests. Their academic test scores also were poor. The students were interviewed. A hardened upbringing enabled them to develop coping mechanisms to address adversities but inspite of their consistent efforts, their poor innate aptitude towards reasoning and mathematical abilities resulted in poor scholastic performance. Their parents were illiterate and unable to provide academic support at home.

6.2. Relation between Resilience and Gender

A further analysis is carried out to understand whether resilience is linked to the gender. Literature in the field gives contradicting results with some showing a high correlation while a few others show a moderate to low correlation with gender. The gender sensitivity of resilience depends on the socio-cultural factors at play in the subject environment. It is both time dependent and space dependent. It is sought to study the relation in the current Indian urban lower middle class adolescent's context.

The specific hypothesis of the present study is

H₀ : There is no difference in Male and Female adolescents in their resilience attributes.

A sample of 62 male and 63 female adolescents were administered the BURS resilience test. The test was conducted in the classroom setting with the informed consent of the adolescents. The results of the two independent sample t-tests and the descriptive statistics at 95% confidence level are tabulated :

Table 3. Results of the t-Test

t-Test: Two-Sample

	Male	Female
Mean	101.46	97.75
Variance	267.25	275.11
Observations	63.00	62.00
Pooled Variance	271.08	
Hypothesized Mean Difference	0.00	
df	124.00	
t Stat	1.25	
P(T<=t) two-tail	0.21	
t Critical two-tail	1.98	

The mean and standards deviation of the resilience of the male students (Mean = 101.46 Var= 267.25) does not differ significantly from that of the female students (Mean = 97.75, Var= 275.11). The computed t-statistic (1.25) is lesser than the critical t-value (1.98). Further, the computed P value (0.21) is more than the α value (0.05). **Hence it is clear that in the specific context, resilience does not differ by gender.** Hence the Null hypothesis is accepted.

6.3. Evolution of Resilience with Age

Resilience is theoretically considered to enhance with increased exposure to life experiences. The student develops adaptability and coping mechanism to deal with adverse situations. Early adolescence is a period of turmoil and stress. The student exhibits maladaptive behaviour and inappropriate responses. However, towards later adolescence, the student is expected to learn by past experience, desist from responses which yield negative results and pursue those resilient characteristics which enable the student to overcome the distress. This paper tests the hypothesis of such learning mechanism either by experience or by structured counseling.

The specific hypothesis of the current study is

H₀ : There is no significant difference in the scores of resilience of adolescents on the basis of their age.

The sample to which the BURS test was administered comprised students of class VIII, IX and X belonging to the age group from 12 to 17. The sample size of 125 students was classified into three groups as under :

12 – 13 years : 40 nos.
 14 years : 42 nos.
 15 - 17 years : 43 nos.

The mean and standard deviation of the resilience obtained by the respondents classified on the basis of their age groups is as below :

Table 4. Age-wise resilience score statistics

Groups	Count	Sum	Average	Variance
Age 12-13 years	40.00	3826.00	95.65	176.85
Age 14 years	43.00	3992.00	97.37	304.34
Age 15-17years	42.00	4439.00	105.69	287.00

Table 5. One way ANOVA for resilience by Age

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2386.38	2.00	1193.19	4.64	0.01	3.07
Within Groups	30837.59	124.00	256.98			
Total	33223.97	122.00				

To test the hypothesis that the age group has a significant influence on resilience, a one way analysis of variance was conducted. A significance value of F= 4.64 was obtained at P<0.05. Since the F statistic is higher than the P value, the Null hypothesis is rejected. **This means that age has a significant influence on the**

resilience levels of adolescents. That is, adolescents learn coping mechanisms and improve their ability to face crisis and distress very fast during their adolescent maturity process. Adolescents in the age group 14 – 17 years are more resilient when compared with the other age groups. This confirms the ability of adolescents to learn from experiences to cope with risk factors.

7. Discussions

This research establishes the influence of resilience on the scholastic performance of adolescents. Scholastic performance is essential for the youth for securing their future and choosing appropriate career choices. While scholastic performance is dependent to a good degree to the innate aptitude of a student, this paper has shown that it is possible to enhance the scholastic performance by influencing the abilities and mental disposition of the student. Scholastic performance can be enhanced by two means. One is training on the specific skill set whether it is verbal, analytical or mathematical skills. The other is counseling to improve resilience.

The constructs of academic resilience include risk factors and environment protective factors. While these are given in an environment and the adolescent has little control over them, appropriate counseling will aid the respondent to deal with the risk factors and leverage the environment protective factors. Andrew Martin(2006) has brought out the five C framework for counseling to enhance academic resilience. These include enhancing Confidence (self efficacy), Co-ordination (Planning), Control (Absorption), Composure (Low anxiety) and Commitment (Persistence) . Counseling should focus on these attributes to bring out the best in the respondent.

It is also possible to address the environment factors in the immediate vicinity of the adolescent through family counseling. Luisa Rojas (2015) has identified risk factors like marital discord, domestic violence, harsh discipline, lack of positive parental skills and poor emotional support as critical factors to be addressed during counseling. Counseling could also be used to leverage the environmental protective factors like emotional support, role models, respectful communication and meaningful family involvement.

The study has brought out no significant difference between female and male respondents on their resilience scores. It corroborates the

findings of Sreehari & Radhakrishnan Nair (2015) carried out in the Indian context. There have been studies in different cultural settings which bring out stark difference in resilience between male and female adolescents. The study by Teresa et al (2003) of American urban high school students and those by Scott Plunkett (2008) and Rosemary Gonzales (1997) on Mexican origin high school students revealed varied brings out gender differences in resilience.

Traditionally, it is believed that females have a higher capability to absorb prolonged distress while male adolescents have an ability to handle sporadic stress spikes. Empirical investigations by John Curtis and Dante Cicchetti (2003) examine the biological contributors to resilience. This includes emotion, cognition, neuroendocrine and immune functioning which differs across genders. The environment risk factors are also believed to be loaded unfavourably towards the female adolescents in the Indian environment. It is possible that the innate ability among females to endure prolonged distress more than compensates for the environmental risk factors, or rather enhances their resilience. This is a subject matter of conjecture and needs further study.

The study has brought out significant increase in resilience scores from early adolescence to late adolescence. This indicates that the urban adolescent population has a high disposition to learn from critical encounters and develop positive coping mechanisms. Fergus and Zimmerman (2005) reason that as adolescents continue to be exposed to adversity, their capacity to thrive increases despite risk increases. Further, it indicates that it is possible to develop resilience as a skill among the adolescents and practice of these skills can enable them to face the situations better. This directly contributes to the scholastic performance.

Phenomenological examination of outliers reveals that innate scholastic aptitude has a very high influence on the performance in test scores and academic results. It is not possible to alter the aptitude of an adolescent by training or counseling. However, it is possible to align the career choices and vocational preferences by career counseling based on the scholastic performance scores if it shows no significant improvement with resilience counseling or training.

8. Conclusions

The paper has brought out significant correlation between resilience and scholastic performance. It has shown that scholastic performance is not just a byproduct of innate qualities of an individual but it is possible to enhance the same. Enhancement of scholastic performance involves a combination of academic skill training and resilience enhancing counseling. There is a significant role for trainers and counselors in improving the scholastic performance of adolescents. Urban low income adolescents are exposed to a lot of environmental risk factors and there is a need to prepare them to face the challenges so that they blossom into mature and competent adults.

References

- [1] Ahern, N. R., Ark, P., & Byers, J. (2008). Resilience and coping strategies in adolescents—additional content. *Paediatric Care*, 20(10), S1-S8.
- [2] Annalakshmi N (2008). The resilient individual: A personality analysis. *Journal of the Indian Academy of Applied Psychology*, 34, 110-118.
- [3] Annalakshmi N. (2015). Predictors of resilience among adolescents of low socio-economic status in India. *International Review of Psychiatry*, 27(3), 204-217.
- [4] Brown, S. D., Lent, R. W., & Larkin, K. C. (1989). Self-efficacy as a moderator of scholastic aptitude-academic performance relationships. *Journal of vocational behavior*, 35(1), 64-75. doi.org//10.1016/0001-8791(89)90048-1
- [5] Christine De Baca(2014) A review of literature ; Resiliency and Academic performance ; http://www.scholarcentric.com/wp-content/uploads/2014/03/SC_Resiliency_Academic_Performance_WP.pdf
- [6] Chung P J , Shetgiri, R., Kataoka, S. H., Ryan, G. W., Askew, L. M., & Schuster, M. A. (2009). Risk and resilience in Latinos: A community-based participatory research study. *American Journal of Preventive Medicine*, 37(6), S217-S224.
- [6a] Curtis, W. John, and Dante Cicchetti.(2003) "Moving research on resilience into the 21st century: Theoretical and methodological considerations in examining the biological contributors to resilience." *Development and psychopathology* 15.3 : 773-810.
- [7] Davis, A., Solberg, V. S., de Baca, C., & Gore, T. H. (2014). Use of social emotional learning skills to predict future academic success and

progress toward graduation. *Journal of Education for Students Placed at Risk (JESPAR)*, 19(3-4), 169-182.

[8] Elias, Maurice J. (2003) *Academic and Social-Emotional Learning*. Educational Practices Series. INSTITUTION International Bureau of Education, Geneva (Switzerland); International Academy of Education, Brussels (Belgium). Report No.-11 Pub. date 2003-00-00

[9] Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annu. Rev. Public Health*, 26, 399-419.

[10] Gonzalez, R., & Padilla, A. M. (1997). The academic resilience of Mexican American high school students. *Hispanic Journal of Behavioral Sciences*, 19(3), 301-317.

[11] Hollister-Wagner, G. H., Foshee, V. A., & Jackson, C. (2001). Adolescent aggression: Models of resiliency. *Journal of Applied Social Psychology*, 31(3), 445-466.

[12] Howard, S., Dryden, J., & Johnson, B. (1999). Childhood resilience: Review and critique of literature. *Oxford Review of education*, 25(3), 307-323

[13] Jarvelä, S., Lehtinen, E., & Salonen, P. (2000). Socio-emotional Orientation as a Mediating Variable in the Teaching-Learning Interaction: Implications for instructional design. *Scandinavian Journal of Educational Research*, 44(3), 293-306.

[14] Gayatri Tiwari , Ruchi Galundia (2016) Academic backwardness among rural adolescents: challenge for society ISSN 2320-5407 *International Journal of Advanced Research* (2016), Volume 4, Issue 3, 438-443

[15] Martin, A. J. and Marsh, H. W. (2006), Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychol. Schs.*, 43: 267–281. doi:10.1002/pits.20149

[16] Mini Paul K, Nair MKC (2002) Cognitive development and scholastic achievement. *Teens J Teenage Care Premarital Counseling* 2002; 2: 53-58. 4. Lawrence S, Neinstein MD.

[17] Murray, C. (2003). Risk factors, protective factors, vulnerability, and resilience: A framework for understanding and supporting the adult transitions of youth with high-incidence disabilities. *Remedial and special education*, 24(1), 16-26.

[18] Nair MKC, Mini Paul K, Padmamohan J.(2003) Scholastic performance of adolescents. *Indian Journal of Paediatrics* 2003; 70: 629- 631.

[19] Plunkett, S. W., Henry, C. S., Houltberg, B. J., Sands, T., & Abarca-Mortensen, S. (2008). Academic support by significant others and educational resilience in Mexican-origin ninth grade students from intact families. *The Journal of Early Adolescence*, 28(3), 333-355.

[20] Rojas Flórez, L. F. (2015). Factors Affecting Academic Resilience in Middle School Students: A Case Study (GIST Education and Learning Research Journal, 11, 63-78.

[21] Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American journal of orthopsychiatry*, 57(3), 316.

[22] Saraswati Shashidhar, Chandrika Rao and Radhakrishna Hegde(2009), Department of Pediatrics, MS Ramaiah Medical College and Hospital, Bangalore, Karnataka, India, Factors Affecting Scholastic Performances of Adolescents *Indian Journal of Pediatrics*, Volume 76—May, 2009, 495-499

[23] Schoon, I. (2006). *Risk and resilience: Adaptations in changing times*. Cambridge University Press.

[24] Shastri, P. C. (2013). Resilience: Building immunity in psychiatry. *Indian Journal of Psychiatry*, 55(3), 224.

[25] Slack, W. (1980). The scholastic aptitude test: A critical appraisal. *Harvard Educational Review*, 50(2), 154-175. doi.org/10.17763/haer.50.2.d7556257708652757

[26] Smith, C., & Carlson, B. E. (1997). Stress, coping, and resilience in children and youth. *Social service review*, 71(2), 231-256.

[27] Smokowski, P. R., Rose, S., Todar, K., & Reardon, K. (1999). Postgroup-casualty status, group events, and leader behavior: An early look into the dynamics of damaging group experiences. *Research on Social Work Practice*, 9(5), 555-574.

[28] Snyderman, M., & Rothman, S. (1987). Survey of expert opinion on intelligence and aptitude testing. *American Psychologist*, 42(2), 137.

[29] Sreehari, A Radhakrishnan Nair (2015); Age and gender difference on resilience among school going adolescents ; Global journal for research analysts, Vol-4, Issue-7, July 2015, ISSN No. 2277-8160, pg 195-196

[30] Thapan, M. (2001). Adolescence, embodiment and gender identity in contemporary India: Elite women in a changing society. In Women's Studies International Forum (Vol. 24, No. 3, pp. 359-371). Pergamon.

[31] Valiente, C., Swanson, J., & Eisenberg, N. (2012). Linking students' emotions and academic achievement: When and why emotions matter. *Child development perspectives*, 6(2), 129-135.

[32] Verma, S., & Saraswathi, T. S. (2002). Adolescence in India. *The world's youth adolescence in eight regions of the globe*, 105-140.

[33] Walsh, F. (2002). A family resilience framework: Innovative practice applications. *Family relations*, 51(2), 130-137.

[34] Wasonga, T., Christman, D. E., & Kilmer, L. (2003). Ethnicity, gender and age: Predicting resilience and academic achievement among urban high school students. *American Secondary Education*, 62-74

[35] Werner, E. E. (2000). Protective factors and individual resilience. *Handbook of early childhood intervention*, 2, 115-132.