

## Role of Psychosocial Variables on Lack of Negative Thought of Adolescents with Sickle Cell Anemia (AS) Type

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### ABSTRACT

Purpose of the study was examined the role of psychosocial variables on lack of negative thought of adolescents with sickle cell anemia (AS) type. 200 participants of sickle cell anemia (AS) type were consisted, coming from age group 13 to 18 yrs of Chhattisgarh state. General wellbeing scale and social support scale was applied as a questionnaire for data collection. The result showed that multiple correlation coefficient R was found to be .475 which is significant ( $F = 32.988$ ,  $p < .01$ ). Its square is .226 which indicates that significant variables included in the present analysis (i.e. emotional support, informational support and gender) contributed 22.6% variance in lack of negative thought of sickle cell anemic (AS Type) adolescents. It is observed that practical support contributed 14.3% ( $R^2$  Change = .143), family income contributed 3.3% ( $R^2$  Change = .033), informational support contributed 3.1% ( $R^2$  Change = .031), and gender contributed 1.9% ( $R^2$  Change = .019) variance of lack of negative thought in the subjects.

**Keywords:** *Psychosocial Variables, Negative Thought, Adolescents, Sickle Cell Anemia*

Sickle cell anemia is an inherited blood disorder that affects red blood cells. The sickle cell gene causes the body to produce abnormal hemoglobin. In sickle cell disease, the hemoglobin clumps together, which causes red blood cells to become stiff and develop a C-shaped (“sickle”) form. These sickle red blood cells can block blood vessels, reducing blood flow in many parts of the body. This process results in tissue and organ damage. It also produces stress, negative thinking, sadness, anxiety and depression etc. lack of negative thought means absence of intrusive thoughts which are unwelcome, involuntary thoughts, images or unpleasant ideas that may become obsessions, are upsetting or distressing, and can be difficult to be free from and to manage. Dr. Levenson (2008) reported that SCD is an autosomal recessive genetic disorder of hemoglobin (Hb) structure and the most common of the hemoglobinopathies. While it usually results in anemia, the primary symptomatic

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manifestation of SCD is pain. The most severe form of SCD, homozygous sickle cell anemia (Hb SS), occurs when Hb S is inherited from both parents.

Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care (1994) reported that SCD occurs primarily in those of African descent, but it also afflicts people of Mediterranean, Middle Eastern, and Asian origins. Approximately one in 300 African-Americans have SCD (>70,000 people) and 8% have sickle cell trait. The consequences of SCD are aggravated by social, economic, and healthcare disparities. African Americans are on average poorer, have more limited access to healthcare services, and die sooner than Caucasians. Platt, Brambilla, Rosse, and et al. (1994) noted that life expectancy has increased from a mean of 14 years of age in the 1970s to close to 50 years of age at present. Lee, Thomas, Cupidore, Serjeant, and Serjeant (1995) found median survival was into the fourth decade for homozygous patients. Patients with doubly heterozygous forms of SCD, such as Hb SC, fared even better, and the presence of a higher percentage of persistent fetal hemoglobin (Hb F) was associated with less severe disease and greater longevity. Levenson, McClish, Dahman (2001), Alao, Dewan, Jindal, & Efron (2003) found that most chronic diseases, depression and other psychiatric disorders are common in SCD. Molock and Belgrave (1994) noted that rates of depression are similar to those found in other serious chronic medical disorders, ranging from 18% to 44%, and are increased over rates in the general population even when one controls for illness-related physical symptoms.

Ehigie (2003) studied that subjects with SCD had a prevalence rate of depression greater than those with cancer or malaria while depression in children with SCD have shown mixed results, children experience high rates of fatigue and other somatic complaints, impaired self-esteem, feelings of hopelessness in the context of frequent hospitalizations, absences from school, and the inability to experience a normal childhood. Scott and Scott (1999), Elander, Lusher and Bevan (2004) studied that adults with SCD had lower self-esteem than those with HIV/AIDS or cancer. Children with SCD are often underweight, shorter than normal children, and have delayed puberty. With their small stature, adolescents with SCD encounter problems with self esteem, dissatisfaction with body image, and social isolation, with participation in athletics also limited due to fear of initiating a vaso-occlusive crisis. (Becker, Axelrod, Oyesanmi, Markov, & Kunkel, 2007). School performance suffers when hospitalizations lead to missing multiple school days. Accordingly, adolescents often experience hopelessness and social withdrawal.

Various studies have been carried out showing relationship of wellbeing with psychosocial factors and other factors like caregivers support, depression, anxiety, stress etc, but very few studies were found which dealt with psychosocial factors and lack of negative thought. Hence, the present research was designed to study lack of negative thought of the sickle cell anemic (AS type) adolescents in relation to social support, parental income and gender in general and femininity in specific way.

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### *Objective And Hypotheses*

- To examine whether femininity has any role in determining lack of negative thought of adolescents with sickle cell anemia (AS type). It was hypothesized that femininity would show its significant influence on lack of negative thought of adolescents.
- To examine whether social support has any role in determining lack of negative thought of adolescents with sickle cell anemia (AS type). It was hypothesized that social supports would show their significant influence on lack of negative thought of adolescents.
- To examine whether parental income has any role in determining lack of negative thought of adolescents with sickle cell anemia (AS type). It was hypothesized that parental income would show its significant influence on lack of negative thought of adolescents.

## **METHOD**

### *Sample*

Sample of the study consisted of 200 (100 boys & 100 girls) sickle cell anemic (AS Type) adolescents of Chhattisgarh, coming from age group 13 to 18 yrs. Sickle cell anemia (AS Type) subjects were selected from these settings, i.e. those enrolled in clinics of sickle cell anemic centers, schools and other counseling centers.

### *Design*

Lack of negative thought of adolescents with sickle cell anemic (AS type) adolescents were outcome variables in the study, while predictor variables included social supports (i.e. emotional, practical, informational and companionship support dimensions), parental income and femininity. Hence the design was correlational in nature.

### *Tool*

Tools were related to general wellbeing scale and social support scale.

#### **1. General Wellbeing Scale**

It was a self made scale. The items were based on Rao and Singh (2014) General Wellbeing Scale. A total of 19 items were selected in the scale. It included five dimension of wellbeing (i.e., mental health, lack of negative thought, sharing and creativity, confidence, and satisfaction). Lack of negative thought is a one of dimension of wellbeing.

#### **2. Social Support Scale**

To assess social support, the social support scale was constructed during the study. The constructed was based scale on the Social Support Scale developed by Arora and Kumar (1998). It included four dimension of social support (i.e. emotional, practical, informational and companionship support dimensions)

#### **3. Assessment of Family Income**

To assess family income of the subjects, subjects were asked directly about the monthly income of both the parents.

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### 4. Femininity

Considering boys and girls on same continuum, a score of two was assigned to a girl while one was to a boy. This procedure is also called dummy variables scoring, and scores are treated on interval scale having two points. In this procedure, high score (i.e. 2) represent high femininity; while low score (i.e. 1) represent low femininity.

#### *Procedure*

The purpose of the study was conveyed to the selected subjects. In the process of developing rapport with the subjects it was emphasized that confidentiality would be maintained, and they were assured that the information provided by them will be kept confidential. The instructions related to the scales were made clear to them and then the tools were administered on them. After completion of the work of data collection the respondents were given heartily thanks.

## RESULTS AND DISCUSSION

Results of hierarchical stepwise multiple regression regarding lack of negative thought of adolescents with sickle cell anemia (AS Type) are presented in table 1.1, 1.2 and 1.3. Contributions of significant variables are also depicted in figure 1.4.

**Table 1.1 Model Summary of Lack of Negative Thought in Sickle Cell Anemic (AS Type) adolescents**

Models/Variables	R	R Square	Change Statistics		
			R Square Change	F Change	Sig
Practical support	.378	.143	.143	32.988	.000
Family income	.419	.176	.033	7.840	.006
Informational support	.455	.207	.031	7.648	.006
Femininity	.475	.226	.019	4.767	.030

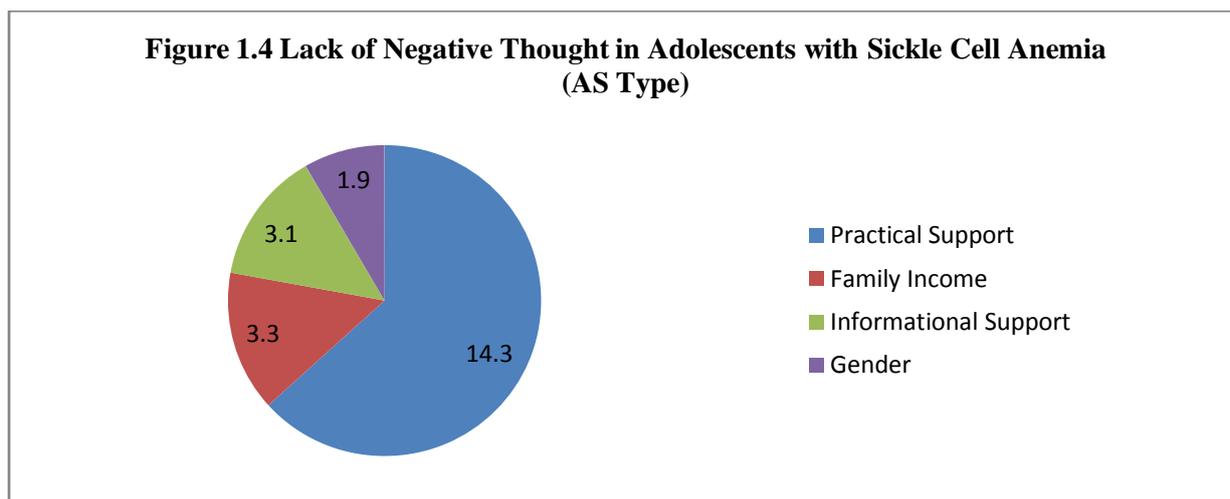
**Table 1.2 Hierarchical Stepwise Multiple Regression for Lack of Negative Thought in adolescents with Sickle Cell Anemia (AS Type): ANOVA Results**

Models/Variables	Sum of Square	df	Mean Square	F	Sig
Regression	170.719	1	170.719	32.988	.000
Residual	1024.676	198	5.175		
Total	1195.395	199			

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**Table 1.3 Hierarchical Stepwise Multiple Regression for Lack of Negative Thought in adolescents with Sickle Cell Anemia (AS Type): coefficient Results**

Significant Variables	Un-Standardized Coefficient (b)	Standardized Coefficient (Beta)	t	Sig
Practical support	.711	.378	5.744	.000
Family income	9.804	.187	2.800	.006
Informational support	.473	.203	2.766	.006
Femininity	.698	.143	2.183	.030



Results show that multiple correlation coefficient R was found to be .475 which is significant ( $F = 32.988, p < .01$ ). Its square is .226 which indicates that significant variables included in the present analysis (i.e. emotional support, informational support and gender) contributed 22.6% variance in lack of negative thought of sickle cell anemic (AS Type) adolescents. It is observed that practical support contributed 14.3% ( $R^2$  Change = .143), family income contributed 3.3% ( $R^2$  Change = .033), informational support contributed 3.1% ( $R^2$  Change = .031), and gender contributed 1.9% ( $R^2$  Change = .019) variance of lack of negative thought in the subjects. The positive b-coefficient for practical support, family income, informational support and gender indicate that lack of negative thought of adolescents with sickle cell anemic (AS Type) increases with increase the practical support, informational support, family income and femininity.

Contribution of significant variables in determining of lack of negative thought in adolescents with sickle cell anemic (AS Type) are presented in the table 1.1. Relative contribution of different independent variables in determining of lack of negative thought of adolescents with sickle cell anemic (AS Type) has been shown in those tables. Results showed that practical support, family income, informational support and gender were significant positive contributions in determining the lack of negative thought in adolescents with sickle cell anemic (AS Type). The first hypothesis that femininity would show its significant influence

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on lack of negative thought of adolescents with sickle cell anemia was supported by the findings of the present research. Results reveal that femininity affected the lack of negative thought of sickle cell anemic (AS Type) adolescents.

The second hypothesis that different types of social supports would show their significant influence on lack of negative thought of adolescents with sickle cell anemia. Results showed that practical and informational supports were significant contributors for sickle cell anemic (AS Type) adolescents. Reblin and Uchino (2008) studied social and emotional support and its implication for health and reported that support can be conceptualized in terms of the structural components (e.g. social integration: being a part of different networks and participating socially) and the functional components (e.g. different types of transactions between individuals, such as emotional support or favors). Thompson et al. (2006) studied support as an encouragement to engage in health behaviors of cancer survivors and HIV patients and noted that the lack of support or isolation can become a barrier to health behavior adherence (Alfonso et al., 2006, Emmons, 2007).

The third hypothesis that parental income would show its significant influence on lack of negative thought of adolescents with sickle cell anemia (AS type). and as a result, higher parental income would show better lack of negative thought of sickle cell anemia (AS Type) adolescents has also been verified by the present research. Results showed that family income was significant factor for all adolescents.

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### **REFERENCE**

- Alao A.O., Dewan. M.J., Jindal. S., Effron. M. (2003). Psychopathology in sickle cell disease. *West Afr J Med.*;22(4):334-337.
- Becker. M., Axelrod. D.J., Oyesanmi. O., Markov. D.D., Kunkel. E.J. (2007). Hematologic problems in psychosomatic medicine. *Psychiatr Clin North Am.*30 (4):739-759.
- Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care.* Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. 1st ed. Washington, DC: National Academies Press; 2002.
- Ehigie BO. Comparative analysis of the psychological consequences of the traumatic experiences of cancer, HIV/AIDS, and sickle cell anemia patients. *IFE Psychologia.* 2003;11(3):34-54.
- Elander J, Lusher J, Bevan D, Telfer P, Burton B. Understanding the causes of problematic pain management in sickle cell disease: evidence that pseudoaddiction plays a more important role than genuine analgesic dependence. *J Pain Symptom Manage.* 2004;27(2):156-169.

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- Lee A, Thomas P, Cupidore L, Serjeant B, Serjeant G. Improved survival in homozygous sickle cell disease: lessons from a cohort study. *BMJ*. 1995;311(7020):1600-1602.
- Levenson (2008). Sickle Cell Anemia In-Depth Report, the new-york times. *Psychiatric Issues in Adults with Sickle Cell Disease*.
- Levenson JL, McClish DK, Dahman BA, et al. Alcohol abuse in sickle cell disease: the PiSCES project. *Am J Addict*. 2007;16(5):383-388.
- Levenson JL, McClish DK, Dahman BA, et al. Depression and anxiety in adults with sickle cell disease: the PiSCES project. *Psychosom Med*. 2008;70(2):192-196.
- Molock SD, Belgrave FZ. Depression and anxiety in patients with sickle cell disease: conceptual and methodological considerations. *J Health Soc Policy*. 1994;5(3-4):39-53.
- Reblin, M., & Uchino, B. M. (2008). Social and emotional support and its implication for health. *Current Opinion in Psychiatry*, 21(2), 201-205.
- Scott KD, Scott AA. Cultural therapeutic awareness of sickle cell anemia. *J Black Psychol*. 1999;25(3):316-335.
- Thompson. H. S., Littles, M., Jakob, S., Coker, C. (2006). Posttreatment breast cancer surveillance and follow-up care experiences of breast cancer survivors of African descent. *Cancer Nursing*. 29, 478-487.

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