

Subjective Wellbeing and Cognitive Development among Socially Deprived and Non-Deprived, Urban and Rural School Students

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Abstract: The present research aims to study the relationship between Subjective wellbeing and Cognitive development among socially deprived and non-deprived, Urban and Rural School Students of Himachal Pradesh. The study has been conducted on a sample of N=480 school students of Himachal Pradesh, India, whose subjective wellbeing was assessed with the help of PGI General Wellbeing Measure; State-Trait Anxiety Inventory-HX-I & II, Satisfaction with Life scale. A 2x2 ANOVA has been implemented for analyzing the results. The findings of the study indicated that subjective wellbeing significantly affected cognitive development among urban and rural, SC and NSC students. Hence, there is a strong need for having a second look at policy formulation intended for the welfare of the students belonging to the deprived sections of both urban and rural areas.

Keywords: Subjective Well-being, Cognitive Abilities, Prolonged Deprivation, Life satisfaction, Mental-health, Poverty, Rural, Urban.

1. INTRODUCTION AND BACKGROUND

The nature of well-being is a complex construct that deals with an optimal experience and functioning. SWB describes how people experience the quality of their lives and includes both emotional reactions and cognitive judgments. It encompasses moods and emotions as well as evaluations of one's satisfaction with general and specific areas of one's life including happiness [5]. Conversely, cognition is a process of apprehending stimulation from the environment as sensory input and further it can be transformed, reduced, elaborated, stored, recovered and used and incorporates all processes through which knowledge of an object is attained [13], [10]. It subsumes familiar representational processes like imagery, perception, free association, through mediation, reasoning, and problem-solving [8], [12].

India is a country that follows multicultural approaches. Here *Brahmin*, *Kshatriya*, *Vaishya*, and *Shudra* people live in unity and harmony despite poverty and inequality. But most of the people in general and the students, in particular, have to bear the cost of poverty in the form of social discrimination and differentiation that affect the wellbeing of the students living in urban and rural areas. Socially deprived children suffer from issues of adjustment patterns, anxiety, self-disclosure, and self-esteem [24], [22]. Many studies have found a strong link between caste and economic status and wellbeing [4], [28]. Applied social psychology has recently been paying due attention for understanding, predicting and controlling the impact of prolonged deprivation on SWB and cognitive abilities in rural and urban areas but significant efforts still required in the field especially for early childhood care and education that may prove beneficial for promoting SWB and later performance of the school children [14], [2]. The children belonging to the lower class are more

emotionally unstable and maladjusted than the higher class children and experience insecurity and neuroticism [18]. Additionally, socially disadvantaged students differ in terms of intelligence and academic achievement and further this difference increases with the increases in the degree of social disadvantage [23]. The school adjustment and academic achievement are intimately related and the disadvantaged group was poor in both [26]. The poor and deprived families have a higher prevalence of mental and behavioural disorders (2:1) compared to rich families and there is a vicious cycle between poverty, economic resources and, mental disorders [15], [32]. Some researchers indicate that there is an ambiguity about the concept of disadvantage and its measurement where the target population needs microanalysis and humanitarian approach to reach at an appropriate consensus while recording the change in the behavior and cognitive processes of school-going children [17], [34], [35]. The students from lower SES families continue to underachieve within the educational settings and it seems that the caste status still has been remaining major obstacle behind emotional and cognitive development in India [6], [20], [29].

The Data on urban and rural sample of 360 SC adolescents from Gujrat (Mehsana) noticed a significant difference between depression and academic anxiety where urban and rural SC adolescents reported more depression than to their NSC counterparts [27]. Similarly, studies on mental ability in science among SC and NSC school students of various districts in Himachal Pradesh found male and female NSC school student's superior as compared to SC counterparts due to stimulating and supporting environment at their homes and society [21]. A performance differences among deprived students from rural as well as urban areas of Himachal Pradesh was also observed where urban students outperformed rural students in cognitive abilities [33], [34]. This difference was also observed in other countries, a significant difference among urban and rural students in various linguistic, logical, visual and interpersonal skills was noticed among Pakistani students [19]. A study conducted on Chinese population shed light on the fact that living in poverty is independently associated with cognitive impairment [11]. A varied relationship between cognitive processing and academic achievement among urban and rural students was observed among students in USA [30]. It has been well researched that the deprivation and discrimination from social stimulation may lead to mental disorganization that further hinder test-taking situation of the students in general and their personality in particular [1], [3], [7].

3. OBJECTIVE OF THE STUDY

The main objective of the study is to investigate the relationship between SWB and Cognitive abilities among socially deprived and non-deprived, rural and urban school students of Himachal Pradesh.

2. METHODOLOGY

The study has been conducted in the rural and urban areas of Himachal Pradesh. The N =480 subjects, almost equal number of male and female, aged 13-16 years studying in 10th - 12th grade was selected randomly, who initially were divided into the groups based on their caste and locality namely the SC-Rural (120), SC-Urban (120), NSC-Rural (120), and NSC Urban 120). For implementing the research design necessary permission was sought from the Principal of concerned schools and subjects were selected based on their consent. They were administered with the measures of SWB and cognitive abilities and data was collected for analysis.

Tools:

The following measures have been used in the present study

PGI General Well-Being Measure: Developed by Verma and Verma (1989) in the Hindi language.

State-Trait Anxiety Inventory (STAI-HX-I and II): The Hindi version (Spielberger, Sharma, and Singh in 1973).

Satisfaction with Life Scale (SWLS): Translated version of Pavot and Diener into Hindi by Lalit Kumar in 2008.

Scrambled Word Task (SWT): It consists of two lists of English sentences: i) Non-Primed (NP) list containing objects and ii) primed sentence list (P) list containing religious stimulus. The subject's task was to identify the related word and exclude the wrong one to for a complete sentence from given choice.

Free Recall Task (FRT): It includes three cards (10-letters, 10-numbers, and 10-romans) not in proper series and order. Each card was displayed for 3 minutes in front of subjects and they have to arrange the actual sequence in a questionnaire.

Problem-Solving Task (PST): a jumbled up list of words in the English was given to the subjects to arrange correctly.

Planned Composition Task (PCT): This task incorporates a picture vague in form to be assessed by the respondents and the score is given on the basis of the organization of theme and uniqueness of the story.

4. RESULTS AND DISCUSSION

Analysis of variance (ANOVA) and average score has been used to analyse the results.

Table 4.1: A 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on PGI-GWB

Source	SS	Df	MS	F	P
Total	119852	479			
C	371	1	371	15.09	<.01
L	452.4	1	452.4	18.4	<.01
C × L	644.03	1	644.03	26.2	<.01
Error	11700.51	476	24.58		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, PGI-GWB = PGI- General Well-being

From table 4.1 the main effect of *Caste* on the measure of PGI-GWB was found $F(1, 476) = 15.09$, $p < .01$, significant. The average score of SC students was 14.03 and the score of NSC was 15.79. It shows, SC students reported poor general wellbeing as compared to their NSC counterparts (see table 4.10). Similarly, the main effect of *Locality* was found $F(1, 476) = 18.40$, $p < .01$, highly significant and average score of rural students was found 13.94 and urban students score was 15.88, it shows better general wellbeing among urban students.

Table 4.2: A 2 × 2 Anova performed on rural and urban, SC and NSC school students on SWLS

Source	SS	Df	MS	F	P
Total	304851	479			
C	69.76	1	69.76	2.31	n.s.
L	742.51	1	742.51	24.57	<.01
C × L	15.05	1	15.05	0.49	n.s.

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, SWLS = Satisfaction with Life Scale

From table 4.2 the main effect of *Locality* was found $F(1, 476) = 24.57$, $p < .01$ highly significant. It was also evident from the average score of rural students was 23.32 as compared to urban students whose score was 25.81 (see table 4.10).

Table 4.3: A 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on STAI- I

Source	SS	Df	MS	F	P
Total	736116	479			
C	681.63	1	681.63	11.67	<.01
L	7.5	1	7.5	0.12	n.s.
C × L	1672.53	1	1672.53	28.63	<.01
Error	27807.53	476	58.41		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, STAI-I = State Anxiety

From table 4.3 the main effect of *Caste* on the measure of STAI-1(State Anxiety) was found $F(1, 476) = 11.67$, $p < .01$, statistically significant. The average score of SC students was 39.54 and, it was 37.16 for NSC (see table 4.10). It shows that SC students reported more state anxiety episodes as compared to their counterparts. Additionally, the interaction between *Caste* × *Locality* was found $F(1, 476) = 28.63$, $p < .01$, statistically significant.

Table 4.4: a 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on PST (Anagram solution - English)

Source	SS	Df	MS	F	P
Total	25741	479			
C	3.5	1	3.5	0.29	n.s.
L	115.05	1	115.05	9.69	<.01
C × L	40.25	1	40.25	3.39	< .05
Error	5651.67	476	11.87		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, PST = Problem Solving Task

From table 4.4 the main effect of the locality was found $F(1, 476) = 9.69, p < .01$, significant. The average score of rural students was 5.95 and, the score of urban students was 6.93. The students belonging to urban locality were found better in anagram solution. Similarly, the interaction between *Caste × Locality* was found $F(1, 476) = 3.39, p < .05$, statistically significant that shows the students belonging to SC and rural areas were found poor in the problem-solving abilities.

Table 4.5: a 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on SWT (Hindi--non-primed)

Source	SS	Df	MS	F	P
Total	20324	479			
C	110.2	1	110.2	12.83	<.01
L	0.01	1	0.01	0.01	n.s.
C × L	1.87	1	1.87	0.21	n.s.
Error	4087.9	476	8.58		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, SWT = Scrambled Word Task

From table 4.5 it is quite clear that the main effect of *Caste* on the measure of SWT was found $F(1, 476) = 12.83, p < .01$, significant. The average score of SC students was found 5.32 as compared to NSC counterpart who scored 6.27. It shows that the students belonging to the general category reported more problem-solving abilities in the non-primed task.

Table 4.6: a 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on SWT (Hindi-- Primed)

Source	SS	Df	MS	F	P
Total	14790	479			
C	107.66	1	107.66	12.25	<.01
L	4.87	1	4.87	0.55	n.s.
C × L	7.09	1	7.09	0.8	n.s.
Error	4176.3	476	8.79		

Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, SWT = Scrambled Word Task

From table 4.6 it is evident that the main effect of *Caste* on the measure of SWT (P = Primed list) was found $F(1, 475) = 12.25, p < .01$, statistically significant. The average score of SC students was found as 5.32 as compared to NSC counterpart who scored 6.27 again verify the high problem solving abilities of NSC students in non-primed task.

Table 4.7: a 2 × 2 ANOVA performed on rural and urban, SC and NSC school students on FRT (Letter)

Source	SS	Df	MS	F	P
Total	23715	479			
C	0.001	1	0.01	0	n.s.
L	669.76	1	669.76	80.84	<.01
C × L	12.35	1	12.35	1.49	n.s.
Error	3943.85	476	8.28		

Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC= Non-Scheduled Caste, FRT = Free Recall Task

From table 4.7 it is quite clear that the main effect of *Locality* was found $F(1, 476) = 80.84, p < .01$, significant. The average score of rural school students on free recall (Letter) was found 5.12 and it was found 7.48 for urban school students, shows urban school students recall the letters more efficiently.

Table 4.8: a 2×2 ANOVA performed on rural and urban, SC and NSC school students on FRT (Number)

Source	SS	Df	MS	F	P
Total	31392	479			
C	16.13	1	16.13	2.03	n.s.
L	161	1	161	20.21	0.01
C \times L	0.4	1	0.4	0.05	n.s.
Error	3792.81	476	7.96		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC = Non-Scheduled Caste, FRT = Free Recall Task

From table 4.8 the main effect of *Locality* was found $F(1, 476) = 20.21, p < .01$, statistically significant. The average score for rural school students on the measure of free recall task (Number) was 8.13 and it was found 6.97 for urban school students. It indicates that rural school students recall the numbers more accurately and in proper order.

Table 4.9: a 2×2 ANOVA performed on rural and urban, SC and NSC school students on FRT (Romans)

Source	SS	Df	MS	F	P
Total	26785	479			
C	2.55	1	2.55	0.31	.n.s
L	25.66	1	25.66	3.14	<.05
C \times L	5.41	1	5.41	0.66	n.s.
Error	3884.75	476	8.16		

*Notation: C = Caste, L = Locality, SC = Scheduled Caste, NSC = Non-Scheduled Caste, FRT = Free Recall Task

From table 4.9 the main effect of the locality was found $F(1, 476) = 3.14, p < .05$, statistically significant. The average score of rural school students on the measure of free recall task (Romans) was 6.67 and it was found to be 7.13 for the urban Counterparts. It shows that urban school students have recalled roman words accurately as compared to rural counterparts.

Table 4.10: Average score of rural and urban, SC and NSC school students

SWB Measure	SC	NSC	Rural	Urban	Cognitive Measures	SC	NSC	Rural	Urban
PGI-GWB	14.09	15.8	13.9	15.9	PST	6.5	6.4	6.0	6.9
SWLS	29.9	24.2	23.3	25.8	SWT (NP)	5.3	6.3	5.8	5.8
STAI-I	39.5	37.2	38.2	38.5	SWT (P)	4.0	5.2	4.8	4.6
STAI-II	42.4	41.6	42.5	41.5	FRT (L)	6.0	6.3	5.1	7.5
					FRT (N)	7.4	7.7	8.1	7.0
					FRT (R)	7.0	6.8	6.7	6.1
					PCT	1.6	1.6	1.6	1.6

*Notation: SC = Scheduled Caste, NSC = Non-Scheduled Caste, AVG = Average, SWB = Subjective/General Wellbeing, SWLS = Satisfaction with Life, STAI = State Anxiety, STAI-II = Trait Anxiety, PST = Problem solving task, SWT (NP) = Scrambled word task- Non-Primed, SWT (P) = Scrambled word task- Primed, FRT (L) = Free Recall Task-Letter, FRT (N) = Free Recall Task - Number, FRT (R) = Free Recall Task- Romans, PCT = Planned Composition Task.

5. CONCLUSION AND SUGGESTION

The study implies that there is a significant difference between SC and NSC; Rural and Urban school students' SWB due to the socio-cultural factors and further this SWB affect the cognitive development. The importance of SWB on the overall quality of social and personal life of individuals has been documented. Research in this area posits that individuals who are happy and satisfied in life are better in performance and tend to be more resistant to stress and depression. Special attention is needed for those with lower social status both in rural and urban areas of Himachal Pradesh. These

students are at more risk of discrimination, dehumanization, degradation, and violence. The students living in low income, low social status, low educational level of parents, handicap them in school potentialities and restrict their social life. This situation further leads to a low level of SWB and poor cognitive development. Hence, there is a strong need for having a second look at policy formulation intended for the welfare of the students in both urban and rural areas. Further, it is suggested that more appropriate measures should be developed to assess the social deprivation, SWB and cognitive abilities of the school students and future research should be carried out on a large sample for more generalised results.

ACKNOWLEDGMENT

I would like to express my deep and sincere gratitude to Eternal University, Baru Sahib, Sirmaur, Himachal Pradesh.

COI: No conflict of interest as no financial aid is received from any organization for conducting this research.

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