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The differing environmental experiences of whites and Negroes may influence their way of adjusting during adolescence. Negro and white adolescents responded to 40 closed end items dealing with adjustmental states. These variables were intercorrelated using a missing data correlation program to adjust for omitted responses. Separate Negro-white correlation matrices were factor analyzed, using the principal components solution with ones places in the diagonals of the matrices. Kaiser's Varimax criterion was applied to obtained orthogonal rotation solutions. Finally, Kaiser's factor comparison program was used to obtain indices of the degree of similarity between the separate factor structures. Areas of similarity were found in clusters dealing with negative affective states, physical correlates of emotional states, aggressive impulses, social rejection, and situational and general anxiety. Although qualitative differences in the configuration of factor structures between Negro and white youth were minimal, the Negro sampling did tend to show less clarity than did the white. This finding suggests that perhaps Negro adolescents may be exposed to more stressful environmental circumstances which produce more diffused adjustmental patterns than white adolescents. (CJ)

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DIMENSIONS OF ADJUSTMENT IN ADOLESCENT

BOYS: NEGRO-WHITE COMPARISONS<sup>1</sup>

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<sup>1</sup>Presented at an APA Symposium on Background Factors, Achievement and Mental Health in Adolescent Boys. Given on Monday, September 2, 1968, San Francisco, California.

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The problem of mental health spans the total population from the very young to the mature adult and aged. Within this broad age range, the period of adolescence represents an important transition point involving dramatic physical and psychological changes for the individual. As such adolescence may be viewed as a relevant age period in which an evaluation of adjustmental patterns would seem most appropriate. However, even within this defined population there is likely to be considerable variation in important social and psychological characteristics. One such characteristic deals with the racial background of the adolescent. Being a white or Negro specifies a range of environmental experiences which may exert a profound influence on an individual's style of adjustment.

#### METHOD

The subjects for this investigation consisted of Negro and white adolescents. As the sample design and size has already been described, no further discussion of sampling characteristics will be presented.

The data for this investigation consisted of the responses to 40 closed end items dealing with adjustmental states. These items are listed in Table 1. The 40 variables were

intercorrelated using a missing data correlation program

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Insert Table 1 Here  
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to adjust the data in those instances in which responses were omitted. The separate Negro-white correlation matrices were factor analyzed using the principal components solution with ones placed in the diagonals of the matrices. Kaiser's Varimax criterion (1958) was applied to obtained orthogonal rotation solutions. Finally, Kaiser's factor comparison program (1960) was used to obtain indices of the degree of similarity between the separate factor structures.

#### RESULTS

The first eight factors from each matrix were extracted and rotated. These are listed in Table 2. In general, the

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Insert Table 2 Here  
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rotation procedure yielded a satisfactory simple structure in which the extracted factors accounted for approximately 45 percent of the total variance in each matrix. Table 3 shows

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Insert Table 3 Here  
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that there was a moderately high similarity between the Negro and white factor structures. A summary description of these similarities is listed in Table 4.

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Insert Table 4 Here  
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One similarity involves a broad associative linkage among items concerned with negative affective states--i.e., feelings of depression, general anxiety, irritability, guilt, and tension.

A second area of similarity concerns the clustering of variables, the content of which focused on aggressive impulses, the overt expression of aggression, and global irritability. Based on a content examination of these associated variables, such feelings and expressions of hostility appear generalized as well as directed toward a specific target, such as the teacher.

A third area of congruence deals with variables predominately concerned with physical correlates of emotional states. This included admitting to such physical symptoms

as rapid heartbeat, headaches, and general tenseness. The fact that there were substantial loadings in such variables as aggressive impulses, irritability, and general anxiety suggests that these are physical reactions to underlying psychological states.

An additional similarity is the clustering of variables dealing with a breakdown of the individual's sense of attachment toward society and social relationships as evinced by feelings of isolation and being unwanted and unloved by others. The fact that the variables for this dimension show coherence for both the Negro and white suggest that the Anomie scale (Srole, 1956) from which these variables were obtained exhibits reasonable internal consistency across diverse samples.

A fifth area of similarity concerns the emergence of a bipolar factor, in which at one end cluster variables focusing on positive or optimistic reactions toward one's self and circumstances (e.g., satisfaction with life), with the other pole associated with variables concerned with pessimistic reaction and negative feeling states including feelings of depression and isolation from society. Though present in both the Negro and white samples, this bipolar dimension evinced more coherence in the latter.

A further area of congruence involves the clustering of variables associated with anxiety related to test taking experiences in the classroom. The fact that items focusing on global anxiety states show only small loadings on this factor, indicates that this dimension probably represents a fairly specific situational anxiety. However, factor VI in the Negro sample and factor VII in the white sample suggest that test anxiety may be associated with a more global and diffused anxiety state. This patterning was especially evident in the Negro factor structure.

A final factor overlapping in the two samples shows a combination of items whose major focus is guilt and general anxiety. The organization of these variables has some parallel to theoretical perspectives, especially when viewed from a psychodynamic framework. Specifically, both anxiety and guilt are hypothesized (e.g., Sears, 1957) as reactions toward unacceptable impulses, such as aggressive feelings. That content dealing with guilt, anxiety and to a lesser extent aggressive feeling (found in the Negro sample) were associatively linked in this dimension is thus consistent with the above theoretical picture.

## DISCUSSION

The results of the parallel factor analyses on Negro and white adolescents shows both similarities and differences. With respect to similarities, the results show that adolescents, regardless of racial background, utilize a number of fairly distinctive frames of reference in describing their mental health states. There is thus little evidence that the adolescent samples responded with a global evaluative dimension. Interestingly enough, the rather specific focus that adolescents used in describing their experienced distress remains fairly stable across diverse adolescent samples.

It may well be that there are some adolescents, or for that matter adults, who respond to questions dealing with personal distress in a generalized fashion, i.e., admitting distress in one area implies admitting to it in another. Perhaps dimension A in which a number of areas of negative affect cluster together typifies that segment of the population who view their adjustmental state in this global fashion. It is likely, however, that for specific groupings of adolescents, considerable differentiation exists regarding adjust-



mental states.

The differences observed in this study do not involve any marked qualitative differences in the configuration of the factor structures between Negro and white adolescents. Rather the differences focus on the clarity and consistency of dimensions extracted for each sample. In particular, in the Negro sample dimensions B, D, E and F tended to exhibit less clarity and organization than in the case of the white adolescent sample. It is difficult to explain such differences on the basis of the available data. One speculation might be that Negro adolescents are exposed to more stressful environmental circumstances which in turn may produce adjustmental patterns which are considerably more diffused and less defined than is the case for white adolescents.

TABLE 1

LISTING OF ITEMS USED IN THE FACTOR ANALYSES

<u>Variables</u>	<u>Item</u>
1	I feel that I'm a person of worth, at least on an equal plane with others.
2	I feel that I can't do anything right.
3	I feel like swearing.
4	I feel like smiling.
5	I feel like losing my temper at my teachers.
6	No one cares what happens, when you get right down to it.
7	The life of the average man is getting worse, not better.
8	I feel tense.
9	People don't really care what happens to the next fellow.
10	I lose my temper easily.
11	I worry about whether my body is growing the way it should.
12	I get irritated a lot more than people know about.
13	I am very satisfied with life.
14	I feel like a powder keg ready to explode.
15	I find a good deal of happiness in life.

Variables

16

Items

When I am in bed at night trying to go to sleep, I find that I am worrying about something.

17

I feel the future looks bright.

18

I am worried.

19

I think I worry more than other students my age.

20

I feel like being a little rude to my teachers.

21

I feel bad about my mistakes.

22

I worry that I might get hurt in some accident.

23

Things seem hopeless.

24

I feel nervous.

25

I feel down in the dumps.

26

Without knowing why, I get a funny feeling in my stomach.

27

I feel depressed.

28

It is hardly fair to bring a child into the world the way things look now.

29

I blame myself when things go wrong.

30

I do things that I feel guilty about afterwards.

31

I do things that make me feel sorry afterwards.

Variables

32

33

34

35

36

37

38

39

40

Items

I lose my temper at my teachers.

I get to feel very panicky when I have to take a surprise exam.

While taking an important exam, I find myself thinking about how much smarter the other students are than I am.

If I were to take an intelligence test, I would worry a great deal before taking it.

I sometimes feel my heart beating very fast during important tests.

Have you ever been bothered by nervousness, feeling fidgety and tense?

Are you ever troubled by headaches or pains in the head?

Have you ever been bothered by your heart beating hard?

Are you ever bothered by nightmares?

TABLE 2

FACTOR LOADINGS ROTATED ORTHOGONALLY FOR THE  
NEGRO AND WHITE ADOLESCENT SAMPLE

<u>Variables</u>	<u>Factors</u>									
	I		II		III		IV		V	
	N	W	N	W	N	W	N	W	N	
1	25	01	25	14	-18	-31	37	01	30	
2	-06	26	13	06	52	10	23	22	16	
3	28	21	06	54	23	11	32	09	-01	
4	06	-07	55	-24	-11	-45	04	06	39	
5	-05	02	01	83	04	04	04	07	-08	
6	-06	02	05	17	12	14	67	11	05	
7	-09	08	17	13	13	-06	55	-21	16	
8	33	65	-15	-06	23	-03	08	15	20	
9	15	00	-09	06	07	16	66	09	-14	
10	-08	08	06	47	26	23	37	35	-23	
11	29	19	10	-06	07	06	14	01	11	
12	27	43	-11	20	00	25	58	13	-12	

TABLE 2

ATED ORTHOGONALLY FOR THE  
TE ADOLESCENT SAMPLE

Factors

IV		V		VI		VII		VIII	
N	W	N	W	N	W	N	W	N	W
37	01	30	05	-19	-19	-24	59	04	-03
23	22	16	-02	00	47	28	-16	-02	01
32	09	-01	10	01	27	29	-12	29	-20
04	06	39	00	17	-01	-08	42	06	-02
04	07	-08	-02	08	18	15	-08	67	00
67	11	05	-05	03	69	02	-14	10	-02
55	-21	16	06	04	58	06	00	15	05
08	15	20	13	02	03	13	-13	37	-01
66	09	-14	02	15	69	09	13	11	-10
37	35	-23	13	-03	05	11	36	49	-10
14	01	11	04	48	10	01	48	12	04
58	13	-12	33	05	01	15	26	08	-15

	I		II		III		IV		V	
	N	W	N	W	N	W	N	W	N	W
13	-11	-16	65	-14	11	-72	02	01	-08	-03
14	18	45	-05	45	31	21	24	25	27	01
15	19	-09	51	-09	-07	-74	02	-20	-20	08
16	47	58	-22	-05	19	03	30	-03	08	09
17	30	-33	69	-10	07	-62	-03	-04	05	13
18	46	73	-24	17	22	19	03	07	-13	15
19	34	64	-15	08	17	13	16	03	23	14
20	03	17	-07	81	06	06	13	01	-01	01
21	66	15	23	-13	-04	-25	-08	07	06	52
22	10	19	15	-13	-08	-12	28	33	23	30
23	23	44	-23	12	29	38	17	16	11	16
24	38	76	-10	08	38	10	02	16	12	19
25	43	65	-33	19	18	30	04	20	08	13
26	33	60	-11	14	12	-27	22	07	26	-06

TABLE 2 Page 2

IV		V		VI		VII		VIII	
N	W	N	W	N	W	N	W	N	
02	01	-08	-03	06	-11	04	-03	-06	-05
24	25	27	01	-25	12	18	-01	33	09
02	-20	-20	08	09	-13	06	15	-43	04
30	-03	08	09	17	01	43	37	01	10
03	-04	05	13	-14	-19	-05	-01	-05	-16
03	07	-13	15	27	05	36	16	27	11
16	03	23	14	-04	06	53	26	04	-04
13	01	-01	01	02	06	34	-02	66	-04
08	07	06	52	15	-02	08	24	00	05
28	33	23	30	58	25	06	10	14	17
17	16	11	16	16	38	19	08	16	24
02	16	12	19	24	06	21	-03	41	13
04	20	08	13	19	14	02	-05	53	05
22	07	26	-06	07	17	16	09	45	24



	I		II		III		IV		V	
	N	W	N	W	N	W	N	W	N	W
27	32	69	-21	19	28	30	23	18	31	08
28	14	12	-15	07	17	40	39	08	14	12
29	66	08	20	-11	07	-06	21	-02	-09	76
30	14	19	09	18	02	03	08	07	02	71
31	06	30	-01	22	00	19	03	-03	06	60
32	-05	07	-02	81	13	13	32	01	01	-01
33	-11	15	-01	-07	13	11	-02	16	61	04
34	02	11	-10	03	09	03	-01	15	00	17
35	-11	05	06	01	24	09	06	14	22	02
36	15	06	01	-06	05	-06	00	-03	70	11
37	10	53	-14	08	68	09	12	53	17	10
38	09	27	-04	06	70	-05	07	69	-06	-03
39	04	22	07	10	83	01	04	70	-02	07
40	08	01	10	08	74	21	10	71	05	00

NOTE.- Decimals have been omitted from this table.

TABLE 2 Page 3

III		IV		V		VI		VII		VIII	
W	N	W	N	W	N	W	N	W	N	W	N
30	23	18	31	08	02	10	09	-02	41	08	
40	39	08	14	12	12	51	03	20	22	17	
-06	21	-02	-09	76	-01	10	06	-11	-10	02	
03	08	07	02	71	13	-04	68	05	26	14	
19	03	-03	06	60	00	05	72	09	32	22	
13	32	01	01	-01	06	03	-05	08	72	05	
11	-02	16	61	04	01	-06	11	-07	05	62	
03	-01	15	00	17	77	21	10	-19	01	53	
09	06	14	22	02	28	00	35	26	-20	62	
-06	00	-03	70	11	22	-05	08	03	-08	75	
09	12	53	17	10	05	-02	-11	-07	18	20	
-05	07	69	-06	-03	31	04	04	-09	04	13	
01	04	70	-02	07	04	06	05	06	07	09	
21	10	71	05	00	-05	05	08	10	26	10	

from this table.

TABLE 3

FACTOR SIMILARITIES BETWEEN THE WHITE AND NEGRO FACTOR MATRICES<sup>a</sup>

Factors (White)	Factors (Negro)							
	1	2	3	4	5	6	7	8
1	.677	-.457	.264	-.163	.365	-.154	.217	.172
2	-.077	.235	-.069	.227	-.034	-.255	.155	.890
3	-.361	-.780	.027	.183	-.259	.324	.119	.195
4	-.001	.213	.873	-.060	-.200	.303	-.202	.142
5	.251	.242	-.068	.000	-.380	.347	.775	-.097
6	.181	.017	.140	.934	.070	-.081	-.013	-.237
7	.434	.064	-.365	.083	.023	.656	-.436	.239
8	-.354	.133	.068	.040	.778	.406	.281	.026

a. Cosine values among factor axes.

**TABLE 4**  
**DIMENSION DESCRIPTIONS**

Dimension Label	Corresponding Factors In The Sample Matrices		Variables Loading Substantially On This Dimension <sup>a</sup>
	Negro	White	
A. Negative affect	1	1	8, 12, 14, 16, 17, 18, 19, 21, 23, 24, 25, 26, 27, 29, 37
B. Implicit and overt expressions of hostility	8	2	3, 5, 8, 10, 14, 15, 20, 24, 25, 26, 27, 31, 32
C. Physical expressions of anxiety	3	4	2, 10, 14, 22, 24, 37, 38, 39, 40
D. Alienation from society (Anomie)	4	6	1, 2, 3, 6, 7, 9, 10, 12, 16, 23, 28, 32
E. Optimism versus pessimism	2	3	1, 4, 13, 15, 17, 23, 25, 27, 28
F. Test anxiety	5	8	1, 4, 27, 33, 34, 35, 36
G. Guilt feelings	7	5	12, 16, 18, 19, 20, 21, 22, 29, 30, 31, 35

<sup>a</sup> Major emphasis is placed on factor loadings of .30 or higher occurring on one or both samples.

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