THE CHILDREN'S PERCEPTUAL ALTERATION SCALE (CPAS): A MEASURE OF CHILDREN'S DISSOCIATION

Mary Evers-Szostak, Ph.D.
Shirley Sanders, Ph.D.

Mary Evers-Szostak, Ph.D., is a pediatric psychologist at Durham Pediatrics, 2609 North Duke Street, Suite 801, Durham, North Carolina 27704.

Shirley Sanders, Ph.D., is Adjunct Professor of Psychiatry at the University of North Carolina at Chapel Hill.

A version of this paper was presented at the Annual Convention of the American Psychological Association, San Francisco, California, August, 1990.

For reprints write Mary Evers-Szostak, Ph.D., Durham Pediatrics, 2609 North Duke Street, Suite 801, Durham, North Carolina 27704.

ABSTRACT

The Children's Perceptual Alteration Scale (CPAS) was developed as a standardized, self-report measure of children's dissociative experiences. Fifty-three children between the ages of eight and twelve completed the CPAS. This included 21 children (17 boys and 4 girls) seen for psychological evaluation or treatment and 32 children (20 girls and 12 boys) in the normal group. Parents of the children in the clinical group completed the Achenbach Child Behavior Checklist and the Eyberg Child Behavior Inventory. Children in the clinical group scored higher on the CPAS than did those in the normal group. Total CPAS score was also found to correlate significantly with Eyberg Intensity, and the Obsessive-Compulsive and Aggressive scales of the CBC. Split-half reliability of the CPAS was good ($r = .75$, $p < .001$). The CPAS appears to be a valid measure of children's dissociative experiences and may be useful in the study of normal development and childhood psychopathology.

INTRODUCTION

Recent increases in reported cases of child abuse and dissociative disorders highlight the need for objective screening measures of dissociation (Kluft, 1985a). There is a clear need for a standardized measure for children, particularly in light of the difficulties with the diagnosis of dissociative disorders in this group. According to Peterson (1990), children predisposed to Multiple Personality Disorder and severe dissociation are rarely identified at an early age. In fact, only three percent are diagnosed prior to age twelve (Kluft, 1985b). There are many possible reasons for this low identification rate. First, since relatively little is known about the specific nature of dissociative behavior in children, confusion with other diagnoses such as Childhood Schizophrenia is probably a factor. Second, Multiple Personality Disorder may be atypical in childhood or may present differently in children than in adults. Third, adults may attribute children's reports of the alteration of perception, behavior, or affect to fantasy or mood. Finally, some clinicians may not be aware of crucial behaviors that signal dissociation in children and may not ask critical questions. As a result, they may fail to determine whether the child misses significant blocks of time, experiences the loss of affective control or cognitive control in a depersonalized or automatic way, or is aware of the triggers of these experiences (Kluft, 1985b).

Previous attempts to address these issues have resulted in the development of behavior problem checklists utilizing observer reports (Fagan and McMahon, 1984; Kluft, 1978; Putnam, 1981). These checklists contain items relating to trance, behavior fluctuation, lying, mood disorder, sleep disorder, abuse, amnesia, and developmental issues. While these observer checklists have been useful, relatively little has been written about how children themselves perceive their dissociative experiences. Furthermore, the use of clinical judgment and an excessive amount of inference can decrease the reliability and validity of findings regarding subjective experiences like dissociation. Therefore, a self-rating scale would be useful in gathering additional information about children's dissociative experiences. Such a scale should also prove useful in diagnostic and treatment efforts.

Sanders (1986) developed the Perceptual Alteration Scale (PAS) as a self-report measure of dissociation in adults. This scale has been used with eating-disordered patients (Sanders, Boswell & Hernandez, 1986), hypnotically susceptible subjects (Perry, 1986), and normal college students (Sanders and Barrett, 1989). In each study the PAS discriminated between populations. In a further study of content validity and reliability within a normal college population, the PAS obtained a reliability of .91. In addition, independent raters obtained an inter-rater reliability of .72 (Sanders, 1990). This measure appears to have content validity and, in the various validation studies, these findings seem to support the construct of dissociation underlying the test items.

The study presented here involved the development of a self-report measure of dissociation for children eight to twelve years of age. This development was based on the already successful efforts with the PAS and worked from an assumption that dissociation is a multi-dimensional concept rather than a simple one. Dissociation also appears to reflect a continuum from normal to pathological behavior (Braun, 1988;

Kluft, 1985a; Watkins H., & Watkins, J, 1990, October, personal communication), so it was hypothesized that the CPAS would correlate with a variety of measures of psychological and emotional functioning. Furthermore, it was predicted that a developmental trend would be evident with levels of dissociation decreasing with age. Finally, it was also predicted that the differences between clinical populations and normal subjects would be reflected by average to moderate dissociation scores for the normals, and higher scores for the clinical sample.

TABLE 1
CPAS Items

1. When I'm awake, I feel like I'm dreaming.
2. I'm grouchy, but I don't mean to be.
3. I cannot sit still.
4. I am hungry.
5. When I start laughing, I cannot stop.
6. When I'm tired, I do things without thinking.
7. I forget what I am supposed to do.
8. I don't like to be at school.
9. I eat even when I am not hungry.
10. I think I want to write, but my hand does not want to.
11. I love my friends, but I hate them, too.
12. I play many games all at the same time.
13. I steal things, but I don't want to.
14. When someone calls me, I don't recognize my name.
15. My feelings change, but I don't want them to.
16. I do not remember what people tell me.
17. I don't know how I got to school.
18. I hide my thoughts from others.
19. After I hit someone, I wish I hadn't.
20. I have an imaginary friend.
21. I think about everything I do.
22. I cannot stop myself from crying.
23. I open my eyes and see I am in a strange place.
24. I want to play and I want to read and I cannot decide.
25. I'm angry, but I don't want to be.
26. I cannot stop my thoughts, but I would like to.
27. My mind cannot stop my body from doing things I don't want it to do.
28. I feel like I'm somebody else watching me.

METHOD

Selection of Items

The 35 items derived from a factor analysis of the PAS were reviewed and rewritten to arrive at the 28 items of the CPAS. This effort was designed to specifically address children's unique experiences and development. Therefore, it was necessary to avoid simply extending adult definitions downward.

The items of the CPAS include automatic experiences, imaginary playmates, amnesia, loss of time, heightened monitoring, and loss of control over behaviors and emotions. Children rate the experiences reflected in each item on a four-point scale from never happening to them (1) to happening to them all the time (4). The total score is attained by summing all the ratings. So that higher ratings indicate higher levels of dissociation, the ratings for item #21 must be reversed before calculating the total score.

INITIAL STUDY IN A PEDIATRIC POPULATION

Subjects

The subjects were 53 children between the ages of eight and twelve years. All of the children were patients in a private pediatrics practice that included five pediatricians and one pediatric psychologist. The normal group included 32 children (20 girls and 12 boys) who were being seen for routine physical examinations. These children had no known history of behavior or emotional problems. The clinical sample included 21 children (17 boys and four girls) who were being seen for either a psychological evaluation or psychotherapy. This group included children with a variety of diagnoses and mainly mild to moderate psychopathology. Diagnoses included: anxiety disorder, attention deficit hyperactivity disorder, depression, oppositional defiant disorder, encopresis, and learning disabilities.

Procedure

Nurses asked the parents (mainly mothers) of the children in the normal sample for permission and gave them a brief letter outlining the purposes of the study. The vast majority of parents agreed to let their children participate, and most of these children completed their CPAS questionnaires at the office. A few questionnaires were returned by mail.

Most of the children in the clinical sample completed their CPAS questionnaires at home as part of an initial psychological evaluation or early in the course of psychotherapy. Parents of the children in this group also completed the Achenbach Child Behavior Checklist (CBC) (Achenbach, 1978) and the Eyberg Child Behavior Inventory (Eyberg and Robinson, 1983).

RESULTS

CPAS Items

Children in both groups tended to use the full range of responses on most items.

In reviewing these results, it was thought that most items with a mean response greater than 1.5 for at least one group were useful items. Using this criterion, four of the 28 items of the CPAS failed to meet the cutoff (Items 13, 14, 17, and 23).

Group Differences

There was a clear pattern of higher total CPAS scores in the clinical group with the clinical boys having the highest average total scores. A t-test found a significant difference between the normal and clinical groups' total CPAS scores ($t(51) = 3.88$, $p < .001$) with the children in the clinical group reporting higher levels of dissociation than did children in the normal group.

Validity

A correlation matrix also revealed some significant correlations between total CPAS score and Eyberg Intensity ($r = .60$, $p < .01$), the Obsessive-Compulsive scale of the CBC ($r = 54$, $p < .05$), and the Aggressive scale of the CBC ($r = .44$, $p < .05$). A negative correlation with age was found, but was not statistically significant.

Reliability

Split-half reliability was calculated by correlating total scores for odd and even items. Correlations were significant for the total sample ($r = .75$, $p < .001$), the normal group ($r = .64$, $p < .001$), and the clinical group ($r = .82$, $p < .001$).

DISCUSSION

The results of this preliminary study are encouraging. The finding that children in both groups tended to use the full range of responses on most items supports the notion that dissociation occurs normally in children to some extent and that it may be measured on a continuum. In addition, a pattern of higher total CPAS scores in the clinical group as compared with the normal group suggests that the CPAS can discriminate between normal and pathological levels of dissociation.

Based on these early findings, it also appears that the CPAS is a reliable and valid self-report measure of dissociation in children. These results are particularly striking in light of the narrow, relatively mild range of psychopathology present in the clinical group. It seems likely that a study including children with a wider range of psychopathology might yield even more striking results. This might include finding that the normal range of dissociation actually lies between a very low level of dissociation and a very high one.

TABLE 2
CPAS Items: Means and Ranges

	Normals (N = 32)		Clinical (N = 21)	
Item	Mean	Range	Mean	Range
1.	1.41	1-2	1.95	1-4
2.	2.25	1-4	2.14	1-4
3.	2.25	1-4	2.55	1-4
4.	2.59	1-4	2.86	1-4
5.	2.41	1-4	2.43	1-4
6.	2.00	1-4	2.67	1-4
7.	2.16	1-4	2.48	1-4
8.	2.03	1-4	2.81	1-4
9.	1.97	1-4	1.90	1-4
10.	1.66	1-3	2.24	1-4
11.	1.78	1-4	1.86	1-4
12.	1.19	1-2	1.86	1-4
13.	1.22	1-4	1.15	1-2
14.	1.22	1-2	1.38	1-3
15.	1.81	1-3	2.19	1-4
16.	2.03	1-3	2.52	1-4
17.	1.03	1-2	1.24	1-4
18.	2.03	1-4	2.43	1-4
19.	2.16	1-4	2.76	1-4
20.	1.25	1-4	1.86	1-4
21.	2.22	1-3	2.33	1-4
22.	1.97	1-4	2.00	1-4
23.	1.22	1-3	1.33	1-4
24.	1.88	1-4	2.14	1-4
25.	2.03	1-3	2.10	1-4
26.	1.91	1-3	2.90	1-4
27.	1.45	1-4	2.38	1-4
28.	1.55	1-4	2.33	1-4

TABLE 3
Total CPAS Scores

GROUP	MEAN TOTAL SCORE	RANGE	STD
Normal Males	49.50	33 - 64	8.02
Normal Females	51.05	40 - 66	7.32
Clinical Males	62.35	46 - 100	11.56
Clinical Females	53.25	50 - 57	2.60

The finding of differences between the normal and clinical groups is consistent with similar findings using the PAS with adult populations. For example, men were found to report more dissociation than women (Sanders and Barrett, 1989), and the finding here of highest total scores among clinical boys appears consistent with this. This finding might be related to risk-taking in boys as compared to the social expectation that girls behave more predictably. Perhaps this finding is related to a lower level of self-awareness and self-consciousness in the boys. More study is certainly needed to answer this question.

The correlational data suggest that scores on the CPAS are somehow related to certain behavior problems, but the scale also appears to be measuring something in addition to child behavior problems and psychopathology. Perhaps it is sensitive to normal development, including cognitive, imaginative, and behavioral facets. This is another possibility that deserves further exploration.

The significant correlations with externalizing behaviors on the CBC suggest that total CPAS scores at least partly reflect automatized behavior that is not consciously controlled. This finding also raises questions about a possible link between Attention Deficit Hyperactivity Disorder and dissociation. It seems possible that a subgroup of children with this disorder may, in fact, have attention problems that are due to excessive levels of certain types of dissociative experiences. Given the large number of children who are identified as having Attention Deficit Hyperactivity Disorder, this area would seem to warrant further examination.

Perhaps most importantly, it appears that children in this age group can provide information about their own dissociative experiences. While the CPAS will likely be of use to clinicians working with youngsters thought to have Multiple Personality Disorder, it should be noted that the CPAS appears to measure something broader than this one disorder. Further investigation of the CPAS appears warranted. Such investigation should target more extensive work with a large normative sample as well as extensive work with a broader range of clinical populations including: victims of child abuse, children in acute and chronic pain, and children thought to have Multiple Personality Disorder. In addition, there appears to be a developmental trend with the frequency of dissociation decreasing with age and this should be examined further.

When the CPAS is compared with the earlier observer rating scales (Fagan and McMahon, 1984; Kluft, 1978; Putnam, 1981), some overlap is evident. However, several important differences can be noted. These address the weaknesses of the observer checklists. First, the categories of the earlier scales are very general and may be colored by the definitions given for adult psychopathology. As is the case in other areas of developmental psychopathology, it may be misleading to extend these adult categories to children. The CPAS was designed to address experiences and definitions specifically for children. Second, since dissociation has been found to extend to cognitive, behavioral, affective, and perceptual experiences (Braun, 1988; Sanders, 1986), it is important to look at children's behavior with respect to these experiences. The earlier checklists categorize mood, but not affect; fluctuation in behavior, but not changes in control; and third person quality, but not changes in self-monitoring.

Many of these weaknesses are typical of observer rating scales in that behavior can be observed but internal experiences cannot. As a result, it is possible that behaviors may be thought to reflect dissociation when that is not what the child is experiencing. It is also likely very difficult to observe behaviors that might result from more mild, normally- occurring dissociation. If this is the case, observer rating scales would be poor instruments for measuring normal dissociation in children. It appears that self-report measures may better capture a wider range of dissociative experiences in children. If this is the case, self-report measures like the CPAS, which contain items relating to subjective experiences, should be particularly helpful to clinicians working with children with a variety of diagnoses to clarify the presence or absence of dissociative behaviors ranging from adaptive to maladaptive.

In summary, the CPAS appears to measure a multidimensional concept of dissociation that can be viewed on a continuum from pathologically restricted dissociative responses to normal ones to pathologically extensive ones. This self-report measure should be helpful in the study of normal development as well as the study of childhood psychopathology. Of course, these findings must be replicated and additional validation studies carried out on a large number of subjects before extensive and definitive statements can be made about the CPAS' utility and value. ■

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The authors wish to thank the staff of Durham Pediatrics, 2609 North Duke Street, Suite 801, Durham, NC 27704.

CPAS

Please read each sentence and circle the number that best describes how often you feel this way.

1. When I'm awake, I feel like I'm dreaming.

never	sometimes	often	almost always
1	2	3	4

2. I'm grouchy, but I don't mean to be.

never	sometimes	often	almost always
1	2	3	4

3. I cannot sit still.

never	sometimes	often	almost always
1	2	3	4

4. I am hungry.

never	sometimes	often	almost always
1	2	3	4

5. When I start laughing, I cannot stop.

never	sometimes	often	almost always
1	2	3	4

6. When I'm tired, I do things without thinking.

never	sometimes	often	almost always
1	2	3	4

7. I forget what I am supposed to do.

never	sometimes	often	almost always
1	2	3	4

8. I don't like to be at school.

never	sometimes	often	almost always
1	2	3	4

9. I eat even when I am not hungry.

never	sometimes	often	almost always
1	2	3	4

10. I think I want to write, but my hand does not want to.

never	sometimes	often	almost always
1	2	3	4

11. I love my friends, but I hate them, too.

never	sometimes	often	almost always
1	2	3	4

12. I play many games all at the same time.

never	sometimes	often	almost always
1	2	3	4

13. I steal things, but I don't want to.

never	sometimes	often	almost always
1	2	3	4

14. When someone calls me, I don't recognize my name.

never	sometimes	often	almost always
1	2	3	4

15. My feelings change, but I don't want them to.

never	sometimes	often	almost always
1	2	3	4

16. I do not remember what people tell me.

never	sometimes	often	almost always
1	2	3	4

17. I don't know how I got to school.

never	sometimes	often	almost always
1	2	3	4

18. I hide my thoughts from others.

never	sometimes	often	almost always
1	2	3	4

19. After I hit someone, I wish I hadn't.

never	sometimes	often	almost always
1	2	3	4

20. I have an imaginary friend.

never	sometimes	often	almost always
1	2	3	4

21. I think about everything I do.

never	sometimes	often	almost always
1	2	3	4

22. I cannot stop myself from crying.

never	sometimes	often	almost always
1	2	3	4

23. I open my eyes and see I am in a strange place.

never	sometimes	often	almost always
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24. I want to play and I want to read and I cannot decide.

never	sometimes	often	almost always
1	2	3	4

25. I'm angry, but I don't want to be.

never	sometimes	often	almost always
1	2	3	4

26. I cannot stop my thoughts, but I would like to.

never	sometimes	often	almost always
1	2	3	4

27. My mind cannot stop my body from doing things I don't want it to do.

never	sometimes	often	almost always
1	2	3	4

28. I feel like I'm somebody else watching me.

never	sometimes	often	almost always
1	2	3	4