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# Stability and Discriminant Validity of the Adult Attachment Interview A Psychometric Study in Young Israeli Adults

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Fifty-nine male and female Israeli students were interviewed twice by 2 different interviewers at 3-month intervals to assess the Adult Attachment Interview's (AAI; <u>C. George, N. Kaplan, & M. Main, 1985</u>) test—retest reliability and the effects of the interviewers on the interview itself as well as its subsequent classification. Various memory measures were used to obtain a wide range of information about subjects' memory abilities. Information was also obtained from the students' records about various intelligence-related skills. Results showed high degree of interjudge and test—retest reliabilities, irrespective of interviewers. The classifications on the AAI were not found to be associated with nonattachment-related memory and intelligence abilities.

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The Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985) has recently come into increasing use in connection with the study of intergenerational transmission of attachment. The AAI represents an attempt to assess current mental representation by adults of their childhood attachment experiences (Main, Kaplan, & Cassidy, 1985). Even when applied before the birth of a child, the AAI has been found to predict the quality of infant-parent attachment relationships (Benoit & Parker, in press; Fonagy, Steele, & Steele, 1991; Radojevic, 1992; Ward & Carlson, in press ). In a meta-analysis of 18 studies involving a total of 854 families, Van IJzendoorn (in press) found that there is a substantial overall effect size for the relation between adult-attachment security and infant-attachment security (combined r = .47). The psychometric properties of the AAI have received much less attention ( Bakermans-Kranenburg & Van IJzendoorn, 1993; Waters et al., 1993), although the precise meaning of developmental measures can only be established by psychometric research. Studies of the psychometric characteristics of the AAI are of particular importance, because the AAI is a semistandardized interview stressing on "natural" discourse, a circumstance that might affect its reliability. Furthermore, the AAI classification system infers the subject's mental representation of attachment from the form of the interview transcript. This inference is based on the coherence of the transcript, although it may be argued alternatively that subjects' general cognitive and memory abilities are being assessed.

An initial attempt to deal with some of these psychometric issues (<u>Bakermans-Kranenburg & Van IJzendoorn, 1993</u>) revealed that the reliability of AAI classifications among Dutch mothers was quite high over time and across different interviewers, and that AAI classifications were independent of nonattachment-related domains of memory and cognitive abilities. In a second study, carried out with American mothers (<u>Waters et al., 1993</u>), the AAI appeared to be independent of coherence of reasoning about a nonattachment-related issue (i.e., job experience) but was found to be related to a general measure of mental ability (i.e., the Henmon—Nelson test).

The few extant psychometric studies of the AAI have raised a number of issues. First, the AAI relies heavily on the production and analysis of discourse that is embedded in a particular culture and language. Different languages within different cultures can often elicit different meanings ( Berman, 1986; Bowerman, 1985). Indeed this is one of the potential weaknesses of the verbal AAI measure. As a minimal requirement for establishing the universal validity of the AAI, psychometric studies using different languages should yield similar results. Because of the important role of Israeli attachment data in earlier discussions of the cross-cultural validity of attachment theory (Van IJzendoorn, 1990), the replication of the Dutch and the American studies in a specifically Israeli context is relevant. Second, the contradictory evidence of the psychometric investigations of Bakermans-Kranenburg and Van IJzendoorn (1993) versus Waters et al. (1993) regarding the relation between adult attachment and cognitive abilities warrants a replication and extension of both these studies. In interpreting AAI classifications, it is crucial to know if mental representations (secure or insecure) regarding attachment have been measured or if this assessment is contaminated by differences in logical reasoning per se. Third, the AAI is being increasingly used in testing adolescent and young adult populations that have not experienced parenthood (e.g., Allen, 1993; Kobak & Sceery, 1988). Thus another goal of the present study was to examine the psychometric properties of the AAI when applied to young adults. Fourth, the Bakermans-Kranenburg and Van IJzendoorn study did not sufficiently address the AAI's discriminant validity with respect to autobiographical memory. The researchers themselves have stressed that their memory measures were provisional and experimental, and

they have suggested that further research with supplementary and different measures are necessary to determine conclusively if AAI classifications are indeed independent of autobiographical memory abilities. Finally, trained raters are regarded as being the most adequate interviewers because they are able to anticipate the potential lack of relevant coding information during the interview (E. Hesse, personal communication, August 2, 1993), but it is still to be determined if being an AAI interviewer contaminates the rating outcome.

# Method

#### **Subjects**

Sixty unmarried Israeli students (31 women and 29 men) ranging in age from 21 to 27 years (M = 22.96, SD = 1.39) participated in the study. Our final database consisted of 59 subjects as a result of a technical failure in the case of one of the subjects. The students represented a wide range of disciplines that covered the liberal arts and the behavioral, social, exact, natural, and technological sciences. In contrast to the Dutch psychometric study of mothers (<u>Bakermans-Kranenburg & Van IJzendoorn, 1993</u>), in the present investigation no age differences were found between subjects classified as autonomous and subjects classified as insecure.

### Procedure

Each subject visited the laboratory twice. On the initial visit the subject filled out a background questionnaire and completed a number of memory tests. The AAI was then administered to the subject for the first time. Consent was also obtained from the subjects for the use of their university admission test scores from the National Center for Testing and Assessment (NCTA; similar to the Educational Testing Service in Princeton). Three months later, all of the subjects again visited the laboratory, this time completing a recall and a recognition test for the material that they had learned and memorized during the first session. The AAI was then readministered. The subjects were not aware that they would be asked to respond again to the AAI 3 months later.

### **Measures AAI**

This is a semistructured interview (George et al., 1985) consisting of 15 questions concerned with global descriptions of past experiences and with specific biographical events. The interviews were transcribed verbatim and were later rated on scales for childhood experiences as inferred from the subject's descriptions and for current states of mind as expressed by the interviewee. The rating scales were especially important in making the process of classification more transparent and replicable. On the basis of the various profiles furnished by the scales, four categories can be established: dismissing of attachment (Ds), when the subject avoids considering or discussing prior attachment experiences; Preoccupied (E), when the subject demonstrates an ambivalent consideration of past experiences, being still preoccupied with past experiences and continuing to exhibit anger or passivity toward attachment figures and prior experiences; *autonomous* (F), when the subject feels free to explore past experiences (this accessibility to prior experiences tends to be fairly smooth, whether the experiences are positive or negative); and *unresolved mourning or trauma* (U), when the subject who has experienced a trauma or the loss of a significant figure continues to experience lack of resolution of the trauma or of mourning associated with the loss and in consequence appears disoriented when discussing these subjects. Following the original classification manual (Main & Goldwyn, 1992), these categories carry the labels Ds, E, F, and U, respectively. Moreover, each category is divided into subgroups: Ds1 through Ds4, E1 through E3, and F1 through F5 (no subgroups for U).

All of the AAIs were conducted by two female interviewers in accordance with the standard guidelines (<u>George et al., 1985</u>). Subjects were assigned to interviewers on the basis of the time of interview, although arrangements were made for an equal number of interviews to be held by each of the interviewers for both the first and the second sessions. Interviews lasted 60—120 min and were transcribed verbatim by three transcribers following the standard guidelines (<u>Main, 1991</u>). Three of the authors, who had been trained by Mary Main, rated the interviews along the lines of the design described in Figure 1.

As can be seen in Figure 1, the interviews were assigned to one of six combinations of raters on the basis of time of interview. According to this division, each rater was made responsible for rating half of the interviews administered during the first session and half of the interviews administered during the second session. In addition, all three interrater combinations were determined as well (Rater 1—Rater 2, Rater 2—Rater 3, and Rater 1—Rater 3), half for the first set of interviews and half for the second set of interviews. Moreover, the internal structure of the design was made so that Rater 1 interviewed 10 of the subjects whom she was responsible for rating, and Rater 2 interviewed 10 other subjects whom she also rated. The 10 cases for each rater were evenly divided between Session 1 and Session 2. For the final coding, rater disagreements were resolved by consensus.

### **Memory Tests**

Various measures were used to obtain a wide range of information regarding the memory abilities of subjects. Note that all of these tests are different from those used in the Dutch study ( Bakermans-Kranenburg & Van IJzendoorn, 1993).

#### Remote memory test.

This is a multiple-choice test designed to describe long-term memory ability (<u>Squire & Slater</u>, <u>1975</u>). The subjects were asked to choose among four TV or radio program titles, one of which was actually shown during their childhood and three of which were "fake." In Israel at the time of the subjects' childhood, there was only one television channel, and radio was the more popular medium of communication. We included two domains in the test: 20 TV programs and 20 radio programs. This we did in accordance with guidelines of <u>Squire and Slater (1975</u>). Subjects were asked to identify the programs. They were also exposed to 10 TV titles in which a word was missing. The subjects were then asked to fill in the missing word and to provide a brief description of each program. Four scores were generated: (a) number of correct radio programs that were identified, (b) number of correct TV programs that were identified, (c) number of TV titles for which the missing word was correctly supplied, and (d) number of correct descriptions of TV programs.

### Galton's method of semantic cuing.

This test (<u>Crovitz & Quine-Holland, 1976</u>) was used to measure individual differences in the store of long-term episodic memory. Subjects were given a test booklet with instructions to think of a memory from their childhood associated with each of the 12 cue words and to write a brief observation concerning each memory next to each of the cue words. They were then asked to give their age at the time that the event had taken place and to describe the event in greater detail. Two scores were generated to assess individual differences in this kind of autobiographical memory: the number of memories which the subject indicated for the 12 cue words and the mean age for these memories as indicated by the subjects (<u>Rubin, 1986</u>).

#### Paired-associate test.

In addition to examining already existing memorized information from the past, we wished also to examine the memory skills of the subjects in a memory task that involved learning new nonattachment-related information. In the first session each subject was asked to learn a list of 20 pairs of words. The list of words was randomly sampled from a list of Hebrew words that were neither frequently nor seldomly used (<u>Balgur, 1968</u>). Each subject was instructed to memorize all the pairs by using the most efficient personal strategy so that all 20 pairs would be remembered correctly. During the second session held 3 months later, the subjects received a list of stimulus words in an order that was different from the original order, and they were asked to furnish as many response words as they could. The number of correct words remembered established a *recall* score (maximum of 20). For each of the stimulus words, the subjects then received four words, only one of which was the correct response word. The subject was asked to identify the correct word. The number of correct identifications established a *recognition* score (also maximum of 20).

#### **Psychometric Assessment**

None of the standard intelligence tests (e.g., the Wechsler Adult Intelligence Scale) have been standardized for adults in Israel. To obtain a valid IQ-like measure, it is proposed (by B. Nevo, former director of NCTA, personal communication, December 19, 1989) that the most useful measure in Israel for high school graduates and college students is the battery of psychometric tests administered for admission at all Israeli universities by the <u>National Center for Testing and Assessment (1984)</u>. In consultation with the center (B. Nevo, personal communication, December 19, 1989), the following four domains were selected: solution of shapes, verbal comprehension, mathematical logic, and general knowledge, as well as a total psychometric score. Again, the measures were different from those used in the Dutch study (<u>Bakermans-Kranenburg & Van IJzendoorn, 1993</u>) so that convergent validity can be maximized.

### **Results and Discussion**

### **AAI Distribution**

In the first session the 59 interviews were classified as follows: 41 (69%) autonomous, 14 (24%) dismissing, and 4 (7%) preoccupied. This distribution is somewhat different from the combined distribution of 51% autonomous, 26% dismissing, and 22% preoccupied subjects in three comparable samples of young adults (<u>Allen, 1993</u>; <u>Kobak & Sceery, 1988</u>; <u>Main, Van</u> <u>IJzendoorn, & Hesse, 1993</u>). Our sample contained more autonomous and, in particular, less preoccupied subjects,  $\chi^2 2$ , N = 237 = 8.68, p = .013. In the second session the 59 interviews were classified similarly: 39 (66%) autonomous, 14 (24%) dismissing, and 6 (10%) preoccupied subjects; this was not significantly different from the combined distributions of young adults,  $\chi^2$ , N = 237 = 5.39, p = .07. Israeli college students may be somewhat more frequently autonomous because of their experience of 3 years of army service before entering college and because they tend on average to be a little older than students elsewhere. If their distribution is compared with the combined samples of normal mothers and fathers (23% dismissing, 59% autonomous, and 18% preoccupied, N = 870; see <u>Van IJzendoorn & Bakermans-Kranenburg, in press</u>), the difference is not significant,  $\chi^2 2$ , N = 929 = 4.80, p = .09.

The distributions found at the first and second time of measurement were highly similar. Thus, time of interview did not affect the general distributions that were found. The distribution of AAI classifications by sex of subjects was as follows: for men, 17 autonomous, 10 dismissing, and 1 preoccupied, and for women, 24 autonomous, 4 dismissing, and 3 preoccupied,  $\chi^2 2$ , N = 59 = 4.63, p = .09. Note that only two cases were classified as unresolved, and they were reliably rated for both the first and the second interview. Sixty-six percent of the students had already experienced one or more losses of significant others. This is quite a high rate of experience of

loss in a population as young as that examined in the study. It was therefore surprising to see that only two cases were classified as unresolved, especially when we consider that in another study ( <u>Ainsworth & Eichberg, 1991</u>) about one third of the subjects' experience of loss were reported as being unresolved. In this latter sample of middle-class American mothers, 67% of the subjects had experienced the loss of an attachment figure. <sup>1</sup>Although the subjects were reliably scored by raters (100%), all further analyses are discussed in terms of the autonomous—dismissing—preoccupied classification system because of the low incidence of unresolved cases in the sample.

### **Rater Agreement**

Percentages of agreement between raters for the three attachment categories (autonomous, dismissing, and preoccupied) were as follows: Rater 1—Rater 2 (100%,  $\kappa = 1.0$ ), Rater 1—Rater 3 (90%,  $\kappa = .82$ ), and Rater 2—Rater 3 (95%,  $\kappa = .91$ ), on the basis of 19, 20, and 20 cases, respectively. Our design also permitted testing for an Interviewer × Rater interaction. First, we computed the agreement figures for self-rated interviews as contrasted by interviews rated by judges who had not conducted interviews themselves. Agreement was 95% and 100% for Session 1 (N = 19) and Session 2 (N = 20), respectively ( $\kappa = .90$  and 1.00, respectively). Second, we computed the agreement figures for those cases in which both judges had not interviewed the subject. Agreement was 98% and 97% for Session 1 (N = 40) and for Session 2 (N = 39), respectively ( $\kappa = .94$  and .94, respectively). Agreements for the self-rated interviews were therefore very similar to what was obtained in cases in which the interviewer and rater were different persons. This would tend to support the conclusion that interviewer and rater may be the same person without jeopardizing the classification, and it demonstrates the robustness of the AAI in this respect.

### **Effects of Interviewers**

The high rater agreement and noninteraction between interviewer and rater are necessary requirements for an evaluation of interviewer effects, because these effects are studied through ratings. First, the length of the interviews was defined as the total number of characters of the WordPerfect 5.1 file containing the transcripts. The mean number of characters for the first interviews and for the second interviews were 25,717 and 22,831, respectively, t(58) = 2.75, p =.008. As expected, interviews administered in the first session were significantly longer than those administered in the second session. No significant differences were found between the two interviewers as regards the length of interviews: for the first interview, M = 23.819; for the second interview, M = 24,728 (p = .416). Second, two interviewers administered the interviews. Following a counterbalanced procedure, each interviewer administered the AAI to half of the subjects in the first session and half of the subjects in the second session. To test for interviewer effects, we examined whether the two interviewers were associated with specific classifications. The distributions of classifications for the two interviewers were as follows: autonomous (41), dismissing (14), and preoccupied (4) for the first interviewer; autonomous (39), dismissing (14), and preoccupied (6) for the second interviewer,  $\chi^2 2$ , N = 59 = 0.45, ns. Despite the semistructured nature of the interview, the data show that the classification system vields convergent results.

### **Test-Retest Reliability**

Absence of interviewer effects, absence of Interviewer × Rater interaction, and high interrater agreement are necessary requirements for establishing test—retest reliability. Results pertaining to the reliability of classifications across the assessments of the first and second sessions are presented in three steps. First, we present the test—retest data for each pair of three pairs of raters. Each pair was responsible for rating about two thirds of the interviews; being a member of

a given pair, each interviewer classified half of the first interviews while her counterpart independently classified the same half for the second interview, and vice versa.

The data appear to be quite consistent. Test—retest stability is high for all three pairs of raters across the first and the second time of assessment: 87%, 87%, and 95% ( $\kappa = .77, .70, \text{ and }.89$ , respectively). Because there is a high degree of interrater agreement and all ratings were carried out independently, the three tests—retests for Session 1 and Session 2 can be viewed as three replications, thereby further supporting the stability of the AAI classifications over time. In the second step we considered all of the ratings in one global analysis. Given that the kappas are high for each pair of raters, it is not surprising that the general test—retest stability as set out in Table 1 is rather high as well (90%,  $\kappa = .79$ ). On a more specific level, a comparison of autonomous versus nonautonomous, dismissing versus nondismissing, and finally preoccupied versus nonpreoccupied indicates a high rate of stability: 90% ( $\kappa = .77$ ), 93% ( $\kappa = .81$ ), and 97% ( $\kappa = .78$ ), respectively.

There were only 6 out of the 59 cases (10%) that were not stable over time. An examination of these cases suggests that this instability was associated primarily with classification decisions involving autonomous (F2) versus dismissing (Ds3) and preoccupied (E2) versus autonomous (F5). These expected difficulties are discussed in the AAI classification manual (<u>Main & Goldwyn, 1992</u>); however, in light of the low rate of instability, such discrepancies can be minimized in the future by further work and experience with the system.

### **Discriminant Validity**

We expected to find no difference between the attachment groups in regards to the various memory and intelligence measures. The formulation of hypotheses in this direction would require an examination of the power of the design to detect significant differences, so that arguments for a possible Type II error can be set to a minimum (<u>Cohen, 1977</u>). The lowest power value for the tests was .78 on the basis of an estimated effect size of d = .80. This analysis indicates that our sample was sufficiently large for potential differences between the attachment categories to be detected.

#### Memory

Three different measures were used to assess the nonattachment-related autobiographical memory, which together yielded six scores: The remote memory test for radio and TV programs resulted in four scores, and the paired-associate test furnished two scores. All scores were on a continuous scale. We therefore carried out a multivariate discriminant function analysis, followed by one-way analyses of variance (ANOVAs) for the separate tests. No multivariate differences were found, nor did the univariate analyses yield any significant differences.<sup>2</sup>In addition, because it could be argued that dismissing adults may not remember details in the AAI owing to inferior memory abilities, specific a priori contrasts were made to compare dismissing and nondismissing subjects. Here too, none of the contrasts were found to be significant. Clearly, therefore, all of these analyses support the hypothesis that the differential responses in the AAI are not a result of differences in memory capacity. The recall scores that were derived from the paired-associate test contained a number of outliers so that this memory dimension was not part of the analyses just specified. Instead, the recall scores were transformed into a categorical scale with the median used as a cutting point, yielding high-recall and low-recall groups. The lowrecall group consisted of 21 autonomous, 6 dismissing, and 2 preoccupied subjects, as compared with the high-recall group, which consisted of 20 autonomous, 8 dismissing, and 2 preoccupied subjects. No significant differences were found between the two distributions, a result that suggests that attachment categories are not differentiated by this recall ability. We also

transformed the recall scores into standardized z scores, which were compared against the critical z value of 1.96. Scores exceeding this value were cross-tabulated with the remaining scores for the dismissing versus nondismissing split. A Fisher exact test revealed a significant association,  $\chi^2 1$ , N = 59 = 6.23, p = .038. Dismissing subjects were overrepresented in the high-recall group. Although the memory tests just reported did not focus on memory of autobiographical events, in the Galton method of semantic cuing the subjects were asked to report autobiographical events, though not as extensively as the AAI probes required. Thus performance on the Galton scores (two scores) was examined by separate ANOVAs. However, no significant differences were revealed, with the number of events recalled being similar for all groups. The dismissing subjects tended to say that they recalled information from a somewhat later age. Because this comparison did not reach statistical significance and the meaning of the small age difference was not clear, this tendency did not seem to deviate seriously from the general pattern, especially when we consider that no significant difference was found for the reported number of autobiographical events.

In general, our data corroborate and extend those reported in the Dutch study (<u>Bakermans-Kranenburg & Van IJzendoorn, 1993</u>). Dismissing subjects can remember quite well on various domain-specific memory tests, but when it comes to the AAI, they find it difficult to retrace attachment-related childhood experiences.

### Intelligence

One total psychometric and four specific intelligence-related scores were available from the psychometric test: general knowledge, verbal comprehension, solution of shapes, and mathematical logic. No multivariate difference was found in the multivariate discriminant function analysis, which was carried out for the four specific scores. Except for that of mathematical logic, none of the measures were found to be discriminated, including the total psychometric score. Although it might be argued that secure subjects would tend to have better coherency scores on the AAI owing to their "superior" level of reasoning, they were generally not found to have realized this potential advantage. Indeed dismissing subjects performed somewhat better on the mathematical logic measure (M = 129.0, SD = 19.8) compared with nondismissing subjects (M = 112.4, SD = 19.0), t(57) = -2.82, p = .007, suggesting once again that not only are dismissing subjects not inferior when compared with the other groups but also that they even perform better at least in the mathematical logic section of this intelligence-related test. Again our findings corroborate those of the Dutch study, in which it was shown that secure subjects are not superior in their performance on intelligence-related tests and that dismissing subjects can do quite well on nonattachment-related tests. We can therefore claim with a greater degree of assurance that their performance in the AAI is specifically determined by their attachment-related difficulties

### Conclusion

Some additional psychometric aspects of the AAI were explored and confirmed in this study. Although the AAI was administered and classified in Hebrew, it yielded results similar to those found when comparable methodologies were used in Dutch (<u>Bakermans-Kranenburg & Van</u><u>IJzendoorn, 1993</u>). The results were also replicated with both male and female students, thereby supplementing the Dutch study, in which only young mothers were examined. Furthermore, the use of a wide range of cognitive and memory tests different from those applied in the earlier study adds to the reliability and validity of the AAI.

Classifications of the AAI were found to be independent of interviewers. Also, when the interviews were administered twice over a time interval of 3 months, a high rate of stability in classifications was found. Moreover, in a wide spectrum of memory tasks, ranging from recollecting past events to exhibiting memory ability of recently acquired information, the subjects were found to perform similarly, irrespective of AAI classifications. This was also the case when the subjects were compared across a number of intelligence-related scales. Not only was it found that the three AAI classifications were independent of nonattachment-related memory and intelligence measures, but it was also found that in some cognitive and memory tasks the dismissing subjects even performed better than nondismissing subjects. This would suggest that dismissing subjects do not have special difficulties in recollecting old as well as new information, nor are they prevented from exhibiting a high level of verbal reasoning. However, in regard to attachment-related information, such as that required in the AAI, the dismissing subjects are less coherent and more idealizing with regard to their childhood experiences. As in the case of the limitations described in the Dutch study (Bakermans-Kranenburg & Van IJzendoorn, 1993), there are a number of issues in the present study that require further research. The question of stability over time needs to be examined with longer time intervals that will allow more leeway for examining the mediating role of life events. Also, further replications that include additional cultures and languages as well as clinical groups can provide stronger foundations for enhancing the utility of the AAI. Furthermore, it should be noted that the sample was selected for high IQ and memory abilities. Thus the possibility cannot be excluded that the AAI confounds attachment quality and cognitive memory capacities in the case of less selective samples.

Finally, the percentage of dismissing subjects (24%) found in the present study deviates quite strongly from the percentage of avoidant infants reported in earlier work on attachment in Israel (e.g., <u>Sagi, Van IJzendoorn, Aviezer, Donnell, & Maysele, 1994</u>). Because the dismissing adult attachment category is shown to be linked to the avoidant infant attachment category across generations, the overrepresentation of dismissing students (or the underrepresentation of avoidant infants in earlier studies) has to be accounted for. This issue needs to be addressed in future research.

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# 1

It is possible that with the heavy exposure to ongoing stress and to incidents of loss in Israel, the population has tended to become "immunized" to stress (<u>Breznitz, 1983a</u>, <u>1983b</u>), so as to psychologically deny these experiences for the purpose of subsequent adaptation. This may correspond to what <u>Main and Goldwyn (1992</u>) have described as *failed mourning*, in other words, avoidance of confronting the experience of loss. Although some consideration has recently been given to the differences between resolved and unresolved loss (<u>Ainsworth & Eichberg, 1991</u>), the notion of failed mourning needs to be studied further (<u>Main & Goldwyn, 1992</u>).

# 2

The table with means and standard deviations for the pertinent measures are available on request from Abraham Sagi.



Table 1.

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Figure 1. Assignment of interviews for classifications according to raters and time of interviews.  $R_1 = Rater 1$ ,  $R_2 = Rater 2$ , and  $R_3 = Rater 3$ .

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