

An exploratory Investigation of Age Differences on the Hand Test in Atlantic Canada

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The Hand Test (HT) was administered to young ($n=50$, M age=19.94 yrs., $SD=4.23$) and older Atlantic Canadian adults ($n=50$, M age=73.16 yrs., $SD=7.74$), with 25 men and 25 women in each group, for the purposes of: 1) investigating age differences in personality; and, 2) to determine if the observed patterns of age differences are similar to results obtained in the United States. Results indicated both similarities and differences in the patterns of age differences with regard to findings on United States samples. The Canadian data reveal increases with age on variables presumably measuring the following personality characteristics: desire for help from others; difficulty in achieving needs or goals; inner personality weakness, perhaps associated with concern with illness and declining health delays and "shock" in coping with situations; less active engagement with the environment; less random energy; and, reduced aggression. This pattern of age differences was similar to those found in United States samples. However, compared to US samples, the protocols of Atlantic Canadian older adults exhibited less personality constriction and generally exhibited a more "psychologically intact" profile. Implications of the results were discussed.

In general, results with United States samples, using projective techniques such as the Rorschach, Thematic Apperception Test, Draw-A-Person Test, and the Hand Test (see Panek, Wagner, & Kennedy-Zwergel, 1983 for review) have regularly conveyed the impression of personality deterioration with normal aging. Specifically, results of studies with the Hand Test (e.g., Hayslip & Panek, 1990; Panek Wagner & Sterns, 1976; Panek, Wagner & Avolio, 1978; Panek & Rush, 1985) suggest that the aging individual, despite individual differences, can be typified as a person whose reality contact has begun to recede, who tends to withdraw from meaningful interactions with life, experiences delays in coping quickly with important life situations, and exhibits less willingness to exert him/herself in order to attain important goals or to be assertive in life situations. Further, aging individuals display an increasing need for others, while their mode of responding becomes more stereotyped and rigid.

Although research indicates that Canadians and Americans have stereotypic images of each other such as, Americans are aggressive, outspoken, arrogant, etc., while Canadians are considered ultraconservative, uncertain, inhibited, passive, etc., (Diemer & Dietz, 1970), there has been very little research

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investigating actual personality differences between Americans and Canadians. Further, those studies that are available have not used projective techniques, nor have they found substantial differences in personalities between Canadians and Americans (e.g., West, 1993). Finally, there have been no investigations of age differences with Canadian samples using projective techniques. Consequently, the purposes of the present exploratory study were to: (i) investigate potential age differences in Hand Test personality variables between Canadian younger and older adults; and, (ii) determine if the observed patterns of age differences are similar to results obtained with previous samples in the United States.

Method :

Participants :

Participants were 100 "community-living" individuals in rural and urban areas of a province in Atlantic Canada ranging in age from 17 to 95 years, who were divided into two distinct age groups: Young Adult ($n=50$, M age= 19.94 yrs., $SD= 4.23$; Men, $n= 25$, M age= 19.16 yrs., $SD= 2.17$; women, $n=25$, M age= 20.70 yrs., $SD= 5.53$ and older Adult $n= 50$ M age = 73.16 yrs., $SD= 7.74$; Men, $n= 25$, M age= 71.60 yrs., $SD= 7.49$; Women, $n= 25$, M age = 74.72 yrs., $SD= 7.82$).

The participants in the young adult group were obtained from an introductory psychology class in a small University in Atlantic Canada, and received a bonus mark for participating in the study. Participants in the older adult group were obtained from various senior's organizations in rural and urban areas of the same Atlantic Canadian Province as the young adult group and received \$5.00 or a movie pass for participating in the study.

Procedure :

Participants were individually administered the Hand Test (Wagner, 1962/1983) by one of the authors (AM or LB), according to standard instructions. All participants were in relatively good health (self-rated questionnaire) and had intellectual functioning levels at or above the average range on the Quick Test of Intelligence (Ammons & Ammons, 1962). Hand Test protocols were scored blind by one of the authors (PEP), who did not know the age group or gender of the protocol scored.

In order to check for scoring reliability, twenty protocols were selected at random and scored blind by the developer of the Hand Test (Dr. Edwin E. Wagner). The twenty protocols consisted of 322 responses. The percent agreement between scores was 84% (270 responses), indicating high inter-rater reliability. Interestingly, of the 52 total scoring disagreements, on 29 (58%) of these disagreements were the scores given by the raters within the same Summary

Score category e.g., ACT vs. ACQ; TEN vs. FEAA; DEP vs. COM.

Results and Discussion :

In line with the purpose of the study, two-tailed Mann-Whitney U Tests (corrected for ties) were computed between the combined sample of Canadian Young Adults and the combined sample of Older Adults for 26 Hand Test variables. This analysis resulted in significant age group differences ($p < .05$) for 11 of the 26 investigated Hand Test (Table 1).

Variables, which were : Dependence ($p < .01$), Aggression ($p \leq .05$), (Active Movement Content) ($p \leq .05$), Passive ($p < .05$), Tension ($p < .05$), Crippled ($p < .001$), Maladjustive ($p < .001$), Total Responses ($p < .001$), High-Low ($p < .001$), Average-Initial-Reaction-Time ($p < .001$), and Pathology ($p < .001$).

Interpreting directly for the Hand Test manual (Wagner, 1962, 1983), results suggest that, as age increases, individuals express significantly more need for help from others (Dependence); relate in a more quiescent manner to the environment (Passive); display less excess or random energy (Movement-Content); manifest less hostility (Aggression); express more inner psychological weaknesses (maladjustive pathology); are more concerned with psychological incapacity, perhaps related to illness and declining health condition (Crippled, Tension); manifest delays in coping quickly with important life situations (Average-Initial-Reaction-Time); and, are more prone to cautious or guarded (High-Low), but exhibit more psychological reactivity to external stimuli (Total Responses).

Overall, these findings, with regard to age differences on the Hand Test are similar to findings on United States samples (see Hayslip et. al., 1990; Panek et al., 1978; Panek and Rush 1985, Panek & Wagner, 1985). Thus, the effects of the normal aging process on those aspects of personality processes measured by the Hand Test appear to be relatively constant in Atlantic Canada and the United States.

However, contrary to what has been repeatedly observed in United States samples (e.g., Panek et. al., 1978; Panek & Rush, 1985; Panek et al., 1976), the Total number of responses was significantly higher in the older adults compared to younger adults, suggesting more complexity and flexibility of personality with aging in the Atlantic Canadian sample. Also, the overall response pattern observed in older adults in Canada can be considered a generally more "psychologically intact" profile, compared to older adult samples in the United States, due to the absence of significant age differences scores/variables often associated with "organic" changes or "personality deterioration" such as Repetitions, Failure, and the Withdrawal score. However, in the absence of a direct comparison with American sample this hypothesis should be considered only speculative.

Table 1
Medians for Investigated Hand Test by Age Group and
Mann-Whitney U-test

	Young Adults (n=50)	Older Adults (n=50)	U	<i>p</i>	
Affection	(MDN)	2.00	1.00	1177.0	.603
Dependence	(MDN)	0.00	1.00	790.5	.000
Communication	(MDN)	2.00	2.00	1066.0	.189
Exhibition	(MDN)	0.00	0.00	1019.5	.072
Direction	(MDN)	1.00	2.00	1018.5	.101
Aggression	(MDN)	1.00	1.00	965.0	.037
ΣInterpersonal	(MDN)	7.00	8.50	1029.0	.126
Active	(MDN)	3.00	3.00	1104.5	.308
Passive	(MDN)	0.00	1.00	957.0	.026
Acquisition	(MDN)	2.00	1.00	1012.0	0.92
ΣEnvironmental	(MDN)	5.00	6.00	1102.0	.304
Tension	(MDN)	0.00	1.00	978.5	.039
Crippled	(MDN)	0.00	0.50	789.5	.000
Fear	(MDN)	0.00	0.00	1072.0	.146
ΣMaladjustive	(MDN)	1.00	2.00	708.0	.000
Description	(MDN)	0.00	0.00	1225.0	.648
Bizarre	(MDN)	0.00	0.00	1200.0	.155
Failure	(MDN)	0.00	0.00	1225.0	.317
ΣWithdrawal	(MDN)	0.00	0.00	1197.0	.437
ΣResponses	(MDN)	13.00	16.50	782.0	.001
Average					
Initial RT	(MDN)	4.50	7.55	617.5	.000
High-Low	(MDN)	8.50	14.50	737.5	.000
Pathology	(MDN)	1.00	2.00	690.0	.000
Repetitions	(MDN)	1.00	1.00	1182.0	.615
Movement					
Content	(MDN)	0.00	0.00	1026.5	.030

Overall, results suggest a consistency in personality differences as measured by the Hand Test accompanying the process of normal aging in Atlantic Canada, and similar to the United States which is typified by increased dependency, passivity, reduced energy, lessened hostility, greater maladjustment which is most likely a reflection of concern with illness or declining health condition, a propensity

to experience a delay in reacting to environmental stimuli, but increased psychological reactivity to external stimuli. However, these results should not be interpreted rigidly to imply "personality deterioration" per se, since these differences may reflect successful adaptation and coping to environmental and interpersonal events, and changes that are experienced as part of the normal aging process. Specifically, as suggested by Baltes (1997) with increasing age individuals, in order to maintain effective or optimal functioning he must learn to compensate and be selective in all aspects of activity and functioning. Thus, delay in coping quickly (Average-Initial-Reaction-Time), increased cautiousness (High - Low), and the increased need for help from others (Dependence), etc., may not be "negative", but may in fact be adaptive for the individual, such as compensation for decreased abilities. Finally, results of the current investigation suggest that the Hand Test can be used effectively with Canadian samples, and provides data which would eventually lead to the development of Canadian norms of the Hand Test. However, due to the limitations associated with cross-sectional research designs we caution against overgeneralization of the data, since "age differences" do not necessarily imply "age changes."

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