ENCAPSULATION, MEASURED BY A SIMPLE WORK INTEREST SCORE, AS A PREDICTOR OF PROSTHETIC ADJUSTMENT IN AMPUTEES [a]

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ABSTRACT

The hypothesis was advanced that the absence of encapsulation, as measured by a greater number of occupations chosen as "liked" on the Wechsler Work Interest Inventory, would be related to better, self-rated prosthetic adjustment in amputees who were later provided with a lower-extremity prosthesis. Of the 100 subjects in a prediction study, 70 took the encapsulation test before rehabilitation and completed a self-rated Prosthesis Evaluation Scale after rehabilitation. The hypothesis was generally supported, with significant predictor-criterion relationships in the male sub-group and trends in the same direction for the females. Although there was a relationship between encapsulation and age, only the former was related to the self-rated criterion.

INTRODUCTION

Within the past two decades the role of the self-concept and its influence on motivation and behavior has received increasing attention.

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Interest in the self-concept was especially generated by the work of Raimy (1948) (1), Rogers (1951) (2), and Snygg and Combs (1949) (3). Patterson (1964) (4) has argued that the self-concept is the single unifying force in human motivation. In their recent review of research in client motivation, Lane and Barry (1970) (5) found that the most extensively investigated intrinsic motivational variable is the self-concept. Lane and Barry state that most writers agree that a person's self-view influences his entire repertoire of behavior and conclude that "it is clear from the studies reviewed here that one's feelings about himself as reflected by measures of the self-concept are among our best predictors of a variety of behaviors (p. 21)."

A basic factor in the study of the self-concept is the method employed in its measurement. Since questionnaires are often the mainstay in estimating attitudes toward self and others, the problem of responses based on social desirability rather than true feelings is especially pertinent. Thus, Feinberg (1967) (6) found that high social desirability scores were significantly related to three separate measures of attitudes toward the disabled. Individuals with high social desirability needs showed significantly more positive attitudes toward the disabled. Feinberg underscored the tendency for self-description in a socially desirable manner to be reflected in all measures of attitude regardless of the content of the scale. Noonan, Barry, and Davis (1970) (7) concluded that the social desirability response set was a confounding influence in the measurement of attitudes in general and of attitudes toward the disabled in particular. A very recent article by Jordan (1971) (8) reviews the different levels of response in the expression of attitudes, ranging from responses based on societal stereotypes or societal norms through personal-moral evaluation or hypothetical action, and finally, through actual feeling and action. It is evident that questionnaires may tap one or more of these levels and that the social desirability factor is a particularly confounding factor in attitudes. Jordan points to inconclusive or contradictory research studies in attitude study. He attributes this "to the fact that factor analytically derived scales and other instruments are often composed of items stemming from different sub-universes of the total attitude universe; i.e., from different levels . . . (p. 7)."

It therefore seems reasonable that if an individual's self-concept could be tapped by means other than transparent questionnaires that are subject to social desirability sets, an important facet of the role of the self-concept might be visible which might have predictive value. Moreover, if the indirect measure of the self-concept is not time- or effort-consuming in administration or scoring, its value would increase. The purpose of this paper is to describe such an instrument which was found to be predictive of adjustment in the rehabilitation of amputees but which also might have value with other disability groups. Recently, Willis,

Harford, and Eddy (1970) (9) presented data providing support for the hypothesis that amputation would be reflected in occupational preferences on the Strong Vocational Interest Blank differing from those of a comparison group of non-amputees. In the present study of amputees, a work interest inventory was employed, not to compare differences between amputees and non-amputees, but to demonstrate how occupational preferences, as checked on a simple work interest inventory, were later related to prosthetic adjustment in a group of unilateral lower-extremity amputees. The rationale of our study was based on the concept of encapsulation or constriction as reflected on a work interest inventory.

ENCAPSULATION OR CONSTRICTION

English and English (1958, p. 179) (10) define encapsulation as "behavior that shuts one off from all possible external stimulation in order to escape a tension-provoking situation." An individual, subject to great anxiety, may attempt to avoid contact with his environment so as to minimize stimuli that evoke unpleasant feelings, and he will thereby show constriction and limitation of his activity in the environment—encapsulation.

Encapsulation is thus the tendency to surround oneself with many barriers against the outside environment and to live within the confines of these barriers. Individuals who adopt this scheme of life show little initiative and effort in meeting the challenge of existence. This is probably an extreme form of passivity, since the individual erects barriers against being acted upon by others. Presumably, the rehabilitation process will not proceed favorably in an encapsulated individual who cannot face the challenges involved in radical adjustment. His passivity and constriction will interfere with the process of adjusting to a new assistive device, such as a prosthesis, and also vocational rehabilitation will be impeded by a reluctance to emerge from his shell to compete for a job. Encapsulation is a defense against taking risks which might lead to failure.

It was hypothesized that the Wechsler Work Interest Inventory would serve as a measure of encapsulation. This inventory lists 44 occupations and was originally designed to measure masculinity-femininity as part of the Cornell Index; however, the inventory was never published with the Cornell Index.[a] In the test directions the subject is told to assume that all 44 occupations pay the same salary and that the subject possesses the ability and opportunity to learn as many of them as he wishes. Which of them might he like and dislike? On the basis of Wechsler's standardization results, 14 occupations are masculine, 12 feminine, and 18 neutral. While Wechsler intended to use this test as a measure of masculinity-

[a] Dr. David Wechsler, personal communication.

femininity, our hypothesis, supported by previous clinical experience with amputees, was that it could serve as a measure of encapsulation as reflected in a low General Occupations Score (GOS). It was felt that a limited number of occupations chosen as "liked" denoted an encapsulated or constricted approach to the environment, while choosing a great number of occupations characterized an individual who is "open" and more flexible in adjusting to his environment. Studies of small samples of amputees (11) supported this hypothesis. It was found that wearers of experimental prostheses adjusted better to the devices and the experimental regimen, if they showed more openness or less encapsulation as indicated by the General Occupations Score—the number of occupations chosen as "liked."

METHOD

Subjects

The encapsulation test was one of a battery of tests given to 100 lower-extremity amputees before prosthetic rehabilitation (12). Since the New York State Division of Vocational Rehabilitation and the New York City Hospitals were the main sources of referral, the amputees volunteering for the study were of lower middle and lower socioeconomic levels. The amputees were referred by these agencies for evaluation when they appeared to be free of major physical complications and stump problems and had recovered, psychologically and physically, from the trauma of amputation. The date of interview ranged from 1 to 35 months after amputation, with a mean interval of 7 months. Testing was scheduled just prior to the beginning of the prosthetic restoration process, so that the acute medical and psychological reactions arising from the amputation experience had subsided. Contact was maintained with the referring agency until rehabilitation procedures were completed, whereupon the amputees rated their own prosthetic adjustment. As regards the main study, significant and internally consistent relationships among many of the predictor measures and between predictor and criterion instruments were found, far exceeding chance expectations.

Of the 100 lower-extremity amputees to whom the predictor battery was administered, 70 took both the encapsulation test before rehabilitation and returned fully completed self-ratings (to be described below) after rehabilitation. Of the remaining 30 subjects, 11 returned incomplete questionnaires, mainly because these persons were still experiencing difficulties in prosthetic rehabilitation. Their questionnaires are therefore not included in this study. Nineteen subjects did not return the scale and could not be reached. A few of the latter had never been fitted with a prosthesis. The 70 subjects who completed the study ranged in age from 18 to 74 years, with a mean age of 51; they had attended from 1 to 20 years of school (mean 9 years). The mean Wechsler Adult Intelli-

gence Scale I.Q. was 96, ranging from 60 to 128. These figures differed only slightly from the total sample of 100 subjects from which they were drawn. Forty-seven subjects were Caucasian (37 men and 10 women); 23 were non-Caucasian, Negroes and Puerto Ricans (12 men and 11 women).

Scoring

Two forms of the inventory are available and both were administered (Appendix A and B). The total number of occupations (masculine, feminine, or neutral) chosen by the subject on both Forms I and II was divided by two. A fraction of ½ was carried to the next integer. (While the maximum possible mean of both forms is 44, the maximum GOS for any S in the sample was 40.)

Self-Rating Criterion (Prosthesis Evaluation Scale)

The self-rating criterion employed was the Prosthesis Evaluation Scale developed by the authors at New York University. This is a self-administered form comprising 25 questions scored on a 5-point scale that assesses numerous aspects of prosthetic adjustment experienced by the amputee (Appendix C). The self-rating form measures the amputee's experience in the areas of comfort, gait, cosmesis, mechanical function, convenience, and activity level.

Reliability

The reliability coefficient for the encapsulation test (GOS) for the sample of 99, from which this sample was drawn, was .94 (based on the correlation of Form I with Form II, both of which were given). The split-half reliability coefficient (corrected by the Spearman-Brown formula) of the Prosthesis Evaluation Scale, based on the 70 fully completed self-ratings of the sample, was .94. In order to prevent contamination, different members of the research team processed the predictor and criterion information.

Treatment of Data

In the main study appropriate statistical techniques were employed in the analysis of the data. These were the Pearson, bi-serial, point bi-serial, and the tetrachoric correlation coefficients. In addition to raw scores, grouped scores were also employed for both predictor tests and criterion, as discussed in the final report (12). Furthermore, non-parametric tests, such as the chi-square test (and the Fisher exact test where appropriate), were employed for the sub-samples, based on amputation level, sex, and race. The chi-square and Fisher tests were employed in a 3 x 3 contingency table employed a priori for all tests in the battery. The chi-square analysis of predictor and criterion scores was accomplished as follows: prior to analysis, the predictor, and similarly the cri-

terion scores, were divided into three categories—Best, Moderate, and Poor—with approximately 33 percent of the scores in each, resulting in a table of nine cells. At times more or less than 33 percent of the scores were placed in a particular category because of ties among, or gaps between, groups of scores which made a category a discrete group. This table was collapsed only if more than 20 percent of the expected frequencies was less than 5 (13, 14).

RESULTS

There was a consistent relationship in the total sample (N=70) and in the sub-samples between absence of encapsulation or constriction (a high General Occupations Score) and better self-rated prosthetic adjustment. In the total sample the product-moment correlation between the predictor and the self-rating on the Prosthesis Evaluation Scale was significant for the grouped scores ($r=.23$; $p<.05$) while the correlation between the raw scores missed significance ($r=.15$). Since the distribution of scores was skewed to the right, the chi-square analysis is more appropriate.

In the chi-square analysis the relationship between predictor and criterion was in the predicted direction for the total sample, but achieved significance only in the male subgroup (Table 1). Thus, among the

TABLE 1.—*Relationship Between Encapsulation (General Occupations Score) and Self-Rating Criterion (Prosthesis Evaluation Scale)*

Male amputees

	General Occupations Score			Totals
Self-rating criterion (Prosthesis evaluation scale)	(0–6)	(7–16)	(17–40)	
Best (3.48–4.84)	5	5	10	20
Moderate (2.96–3.46)	6	7	1	14
Poor (1.56–2.88)	7	5	3	15
Totals	18	17	14	49

Table collapsed to:			
Best	5	5	10
Moderate + Poor	13	12	4

Note: $X^2=7.62$, $df=2$, $p=<.05$, $C=.37$

male amputees, when the three-fold table was collapsed, because the expected frequencies for some cells were too low (13, 14), the distribution was significant (X^2=7.62, df=2, p<.05, C=.37). There was a sharp dichotomy between the highest category of GOS (17–40) and the remaining categories of moderate and low scores. Thus, 71 percent (10 of 14) of the male amputees with the Best GOS scores later appeared in the Best Criterion category, while this was true of only 29 percent (10 of 35) of those men with Poor or Moderate scores.

This dichotomy between the "Best" and other eneral Occupations Scores appears to be of value when the "Best" subjects are needed for a very demanding prosthesis. Table 1 reveals at a glance those S's scoring in the 17–40 GOS range appear to be considerably more suitable than those in the lower ranges. The numerically smaller female sub-group (N=21) showed a trend in the same direction, although the distribution was not statistically significant.

The GOS was not significantly related to etiology, level of amputation, sex, race, intelligence, years of schooling, or time interval between amputation and prosthetic fitting. The GOS was, however, related to age (only in the grouped but not raw scores) in that the younger amputees scored higher on GOS (r=.28; p<.01). Age alone, however, was not related to the self-rating criterion. Thus, it is not chronological age per se that is related to the amputee's self-rating on the Prosthesis Evaluation Scale, but the degree of his encapsulation, to which age may contribute.

DISCUSSION

The findings support the hypothesis that greater freedom from encapsulation, as measured by a willingness to envisage oneself as "open" to many different occupations, is related to better adjustment to a very trying and stress-laden experience, such as wearing a demanding lower-extremity prosthesis. Younger S's are willing to choose more occupations as "liked" in the imaginary situation of having the ability to learn as many occupations as desired. (Nevertheless, while younger S's had more years of education, r=.33, p<.01, education was not related to encapsulation.) Older S's feel the effect of age and are more cautious even in this hypothetical situation. Evidently, the older amputees are not readily "seduced" by this wishful gift of being invested with the ability to equal younger S's in learning and performance and therefore choose fewer occupations. Later in the post-rehabilitation period, when amputees are requested to evaluate their prosthetic adjustment on the Prosthesis Evaluation Scale, the GOS score, rather than age, emerges as a predictor of the amputee's own experience with his prosthesis.

It is noteworthy, however, that level of amputation was not related

to this predictor score of encapsulation, although below-knee amputees generally scored consistently better than above-knee S's on the predictor and criterion instruments (15). It may be conjectured that gradual aging becomes integrated in the self-image and is, to some extent, reflected in the encapsulation score, while this is less the case for a recent amputation trauma. Moreover, even if severity of disability or one's state of physical health were reflected in the encapsulation score, the fact that such a simple test can reveal it and serve as a predictor is noteworthy. It is also suggested that, as previously discussed, the absence of the confounding social desirability factor plays a role in the ability of the General Occupations Score to serve as a predictor variable.

The nature of encapsulation is better understood by a consideration of its significant relationship to other variables. (These correlations were in the .20's, were significant on the .05 level, and were not traceable to the factor of age.) Lesser encapsulation was related to better pain tolerance as measured by two psycho-physiological measures of deep-pressure and surface-pain sensitivity (12, Chap. 6). This suggests either: a. that amputees who are less encapsulated or "locked up" are better able to tolerate pain stimuli or b. that amputees who better tolerate pain stimuli are less inclined to be "locked up" or encapsulated. Lesser encapsulation (a higher GOS) was also associated with better perceptual-motor memory, viz, the recall of more figures on the Bender Gestalt test; with less depression or emotional impulsivity as based on objective measures or Rorschach responses; and with greater feelings of certainty about responses on a questionnaire dealing with their expectations regarding prosthetic rehabilitation. The underlying common denominator appears to be greater ego strength in the face of stressful stimuli and better ability to utilize positive resources in learning situations. Thus, a simple work interest inventory appears to be of some promise in assessing a patient's readiness to cope with prosthetic or possibly orthotic aids.

REFERENCES

1. Raimy, V. C.: Self Reference in Counseling Interviews. Journal of Consulting Psychology, 12:153–163, 1948.
2. Rogers, C. R.: Client Centered Theraphy, Houghton Mifflin, Boston, 1951.
3. Snygg, D. and A. Combs: Individual Behavior. Harpers, New York, 1949.
4. Patterson, C. H.: A Unitary Theory of Motivation and Its Counseling-Implications. Journal of Individual Psychology, 20:17–31, 1964.
5. Lane, J. M. and J. R. Barry: Recent Research on Client Motivation. Rehabilitation Research and Practice Review, 1 (4) :5–25, Fall 1970.
6. Feinberg, L. B.: Social Desirability and Attitudes Toward the Disabled. Personnel and Guidance Journal, 46:375–381, 1967.
7. Noonan, J. R., J. R. Barry, and H. C. Davis: Personality Determinants in Attitudes Toward Disability. Journal of Personality, 38:1–15, 1970.

8. Jordan, J. E.: Attitude-Behavior Research on Physical-Mental-Social Disability and Racial-Ethnic Differences. Psychological Aspects of Disability, 18 (1) :5–26, Mar. 1971.

9. Willis, Constance H., T. Harford, and Barbara Eddy: Comparison of Samples of Amputee and Nonamputee Subjects on the Strong Vocational Interest Blank. Journal of Counseling Psychology, 17:310–312, 1970.

10. English, H. B. and Ava C. English: A Comprehensive Dictionary of Psychological Terms: A Guide to Usage. Longmans, Green, New York, 1958.

11. Weiss, S. A.: The Relationship Between Personality Traits and Acceptance of Prostheses. Paper presented at the 1959 Convention of the American Psychological Association in Cincinnati. American Psychologist, 14:351 (abstract), 1959.

12. Weiss, S. A., S. Fishman, and F. Krause: A Psychological Test Battery for Predicting Success in Prosthetic Rehabilitation. Final report to Social and Rehabilitation Service, Dept. of Health, Education, and Welfare, Project RD–402, New York University Post-Graduate Medical School, 1971.

13. Siegel, S.: Nonparametric Statistics. McGraw-Hill, New York, 1956.

14. Guilford, J. P.: Fundamental Statistics in Psychology and Education. McGraw-Hill, New York, 1965.

15. Weiss, S. A., S. Fishman, and F. Krause: Severity of Disability as Related to Personality and Prosthetic Adjustment of Amputees. Psychological Aspects of Disability, 18 (2) :67–75, 1971.

16. Weiss, S. A.: The Geriatric Amputee: Psycho-Social and Therapeutic Aspects. In Geriatric Amputee, Wash., D.C., National Academy of Sciences-National Research Council (Publication No. 919), pp. 218–229, 1961.

APPENDIX A

WORK INTEREST INVENTORY—FORM I

Sex_____

Name _____ Age _____ Education _____

Below is a list of different jobs and occupations. Suppose that they all paid the same salary and that you had the ability and the chance to learn as many of them as you wished, WHICH OF THEM MIGHT YOU LIKE?

Draw a circle around the letter (L) if you would like to do the work the position calls for.

Draw a circle around the letter (D) if you would dislike to do the kind of work the position calls for.

Answer every item. If you are not sure, guess.

1. Actor	L	D	23. Iron Worker	L	D
2. Artist	L	D	24. Theatre Usher	L	D
3. Auto Racer	L	D	25. Insurance Agent	L	D
4. Aviator	L	D	26. Manufacturer	L	D
5. Building Contractor	L	D	27. Music Teacher	L	D
6. Carpenter	L	D	28. Newspaper Reporter	L	D
7. Club Secretary	L	D	29. Nurse	L	D
8. Clothes Designer	L	D	30. Optician	L	D
9. Cook	L	D	31. Plumber	L	D
10. Dancer	L	D	32. Policeman	L	D
11. Dentist	L	D	33. Preacher	L	D
12. Detective	L	D	34. Prizefighter	L	D
13. Doctor	L	D	35. Retail Merchant	L	D
14. Explorer	L	D	36. Real Estate Broker	L	D
15. Factory Manager	L	D	37. Singer	L	D
16. Farmer	L	D	38. Soldier	L	D
17. Fireman	L	D	39. Stenographer	L	D
18. Florist	L	D	40. Taxi Driver	L	D
19. Forest Ranger	L	D	41. School Teacher	L	D
20. Furniture Dealer	L	D	42. Telephone Operator	L	D
21. Steeplejack	L	D	43. Welder	L	D
22. State Trooper	L	D	44. Window Dresser	L	D

APPENDIX B

WORK INTEREST INVENTORY–FORM II

Name _____ Age _____ Education _____

Below is a list of different jobs and occupations. Suppose that they all paid the same salary and that you had the ability and the chance to learn as many of them as you wished, WHICH OF THEM MIGHT YOU LIKE?

Draw a circle around the letter (L) if you would like to do the work the position calls for.

Draw a circle around the letter (D) if you would dislike to do the kind of work the position calls for.

Answer every item. If you are not sure, guess.

1. Architect	L	D	23. Locomotive Engineer	L	D
2. Art Dealer	L	D	24. Ship Captain	L	D
3. Auto Salesman	L	D	25. Machine Operator	L	D
4. Bank Clerk	L	D	26. Magazine Illustrator	L	D
5. Beautician	L	D	27. Master of Ceremonies	L	D
6. F.B.I. Agent	L	D	28. Physicist	L	D
7. Cattle Raiser	L	D	29. Orchestra Leader	L	D
8. Chef	L	D	30. Night Club Entertainer	L	D
9. Chorus Boy or Girl	L	D	31. Office Manager	L	D
10. Cashier	L	D	32. Nurse's Aide	L	D
11. District Attorney	L	D	33. Private Secretary	L	D
12. Deep Sea Diver	L	D	34. Sales Manager	L	D
13. Drill Sergeant	L	D	35. Sculptor	L	D
14. Dress Designer	L	D	36. Shop Foreman	L	D
15. English Teacher	L	D	37. Short Story Writer	L	D
16. Hair Stylist	L	D	38. Social Worker	L	D
17. Draftsman	L	D	39. Steel Worker	L	D
18. Army Officer	L	D	40. Surgeon	L	D
19. Interior Decorator	L	D	41. Crane Operator	L	D
20. Auto Mechanic	L	D	42. Traffic Manager	L	D
21. Landscape Gardener	L	D	43. Printer	L	D
22. Librarian	L	D	44. Window Trimmer	L	D

APPENDIX C

PROSTHESIS EVALUATION SCALE

Name _____ Date _____

PLEASE READ CAREFULLY. We want to know how good artificial legs now are, and in what ways they need to be improved. There is no one who can answer this question better than the amputee himself. This questionnaire is being given to amputees throughout the country in an effort to determine in what ways they are satisfied or dissatisfied with their artificial limbs.

There are five possible answers to the questions below. Place a check (✓) next to the answer that *best* describes your opinion or feelings. You should read *all* of the possible answers before you choose one. Please use the space to the right of each question to write in any comments or suggestions you would like to make. Thank you.

1. My prosthesis is noisy:
   _____always
   _____frequently
   _____sometimes
   _____rarely
   _____never
2. When walking, my stump:
   _____hurts all of the time
   _____hurts most of the time
   _____hurts about half of the time
   _____hardly ever hurts
   _____never hurts
3. When walking, my artificial limb feels:
   _____very heavy
   _____heavy
   _____not particularly light or heavy
   _____light in weight
   _____very light in weight
4. While wearing my artificial leg during warm weather, the heat in the socket is:
   _____so great that I sometimes have to take off my limb during the day.
   _____considerable. I can wear my prosthesis all day, but it's a real problem.

_____noticeable to the extent that it is sometimes a problem.
_____noticeable but no problem.
_____so little that I never notice it.

5. When dressed in street clothes and *standing*:
_____my prosthesis makes one leg look different than the other and many people notice it.
_____my prosthesis makes one leg look different and some people notice it.
_____my prosthesis makes one leg look different but only a few people notice it.
_____my prosthesis makes one leg look different but no one notices it.
_____my legs look exactly alike.

6. When I'm dressed in street clothes and *sitting* down:
_____my prosthesis makes one leg look different than the other and many people notice it.
_____my prosthesis makes one leg look different and some people notice it.
_____my prosthesis makes one leg look different but only a few people notice it.
_____my prosthesis makes one leg look different but no one notices it.
_____my legs look exactly alike.

7. The socket of my present prosthesis requires adjustment:
_____more often than 6 times a year
_____4 to 6 times a year
_____2 or 3 times a year
_____once a year
_____less than once a year

8. Not counting socket adjustments, my present prosthesis requires repairs:
_____more often than once a month
_____once a month to once every 3 months
_____2 or 3 times a year
_____once a year
_____less than once a year

9. While wearing my prosthesis during warm weather, my stump perspires:
_____so much that I sometimes have to take off my prosthesis during the day.
_____considerably. I can wear my prosthesis all day long, but it's a real problem.
_____noticeably, to the extent that it is sometimes a problem.
_____noticeably, but it is not a problem.
_____so little that I never notice it.

10. The following best describes the way I walk:
    _____I limp very badly.
    _____I limp enough that everyone can tell something is wrong with my leg.
    _____I limp slightly. Most people, however, notice that I limp.
    _____Very few people notice my limp.
    _____I walk the same as before my amputation. I do not limp.
11. The method used to keep my prosthesis on (thigh lacer, knee strap, suction, pelvic band, etc.) is:
    _____uncomfortable all of the time
    _____uncomfortable most of the time
    _____comfortable about half of the time
    _____comfortable most of the time
    _____always comfortable
12. The amount of effort that I must put into walking during normal daily activities is:
    _____extreme. Wearing the artificial limb makes me so tired I sometimes can't wear it all day.
    _____considerable. Wearing the prosthesis makes me very tired, but I am able to wear it all day.
    _____moderate. I definitely tire during the day, but it's no real problem.
    _____little. Wearing the prosthesis makes me somewhat tired.
    _____very little. I never really feel tired while using my prosthesis.
13. When the heel of my prosthesis hits the ground during walking, there is:
    _____extreme jar and "shock." It is always a problem and sometimes hurts my stump or makes me walk poorly.
    _____considerable jar or "shock." It sometimes is a problem and may make me walk poorly.
    _____a moderate amount of jar or "shock," but it is not a problem.
    _____very little jar or "shock."
    _____no jar or "shock."
14. I feel like my amputated limb is still there ("phantom limb"):
    _____all the time
    _____most of the time
    _____about half the time
    _____about one-quarter of the time
    _____never or almost never
15. Pain or discomfort in my "phantom limb" is a problem:
    _____always
    _____frequently
    _____sometimes

_____seldom
_____never

16. In general, my artificial limb is:
_____never comfortable
_____uncomfortable most of the time
_____comfortable about half of the time
_____comfortable most of the time
_____always comfortable

17. During my regular daily activities (from the time I get up in the morning until I go to bed at night), I spend:
_____less than 1 hour walking
_____1 to 2 hours walking
_____3 to 4 hours walking
_____5 to 6 hours walking
_____7 or more hours walking

18. During my regular daily activities (from the time I get up in the morning until I go to bed at night), I spend:
_____less than 2 hours standing
_____2 to 4 hours standing
_____5 to 6 hours standing
_____6 to 8 hours standing
_____9 or more hours standing

19. In addition to my regular daily activities, I also take part in other types of activities *that require me to use my prosthesis* (dancing, hiking, sports, etc.):
_____less than 3 hours a month
_____4 to 7 hours a month
_____8 to 15 hours a month (about ¼ to ½ hour per day)
_____16 to 30 hours a month (about ½ to 1 hour per day)
_____more than 30 hours per month (better than 1 hour per day)

20. Wearing my artificial limb causes backaches:
_____always
_____about ¾ of the time
_____about ½ of the time
_____ about ¼ of the time
_____never

21. Wearing my prosthesis results in abrasions or sores on my stump:
_____always or almost always
_____frequently
_____sometimes
_____rarely
_____never

22. When I walk, the way my prosthetic foot goes from heel to toe feels:
_____extremely uneven. I can hardly walk with it.
_____quite uneven. It causes me to walk poorly.
_____definitely uneven. It affects the way I walk.
_____slightly uneven. It doesn't affect the way I walk.
_____smooth and even.

23. When I walk, the way my prosthetic foot goes from heel to toe takes:
_____an extreme amount of effort. I can hardly walk with it.
_____a great deal of effort. It's a real problem.
_____a definite effort, but it's no problem.
_____very little effort.
_____no effort at all.

24. In general, the prosthesis I am wearing is:
_____very poor. It is completely unsuitable for my type of amputation.
_____poor. It is unsuitable in many ways for my type of amputation.
_____good but could be much better.
_____very good, but can be improved in some ways.
_____the best that can be made for my type of amputation.

25a. ONLY ABOVE-KNEE AMPUTEES ANSWER THIS QUESTION
My artificial limb:
_____sometimes severely hurts my crotch. I sometimes have to take my leg off because of it.
_____sometimes hurts my crotch considerably. The pain is a definite problem but I can wear my prosthesis all day long.
_____sometimes hurts my crotch to the extent that it is a minor problem.
_____sometimes hurts my crotch, but it is no real problem.
_____never hurts my crotch.

25b. ONLY BELOW-KNEE AMPUTEES ANSWER THIS QUESTION
When I sit for long periods of time, my stump or knee:
_____always hurts
_____frequently hurts
_____sometimes hurts
_____on rare occasions hurts
_____never hurts

COMMENTS

Please write below any comments you might care to make regarding the general suitability of your prosthesis, or areas of prosthetic wear not covered by the above questions.

New York University

Scoring Prosthesis Evaluation Scale

The scoring is: 1. poorest adjustment score
2.
3.
4.
5. best adjustment score

The Total Score is the mean of the 25 items.