

**Bibliography
for the
Minnesota Importance Questionnaire**

MIQ

1967-1989

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Copies of the Work Adjustment Project research reports and *Minnesota Studies in Vocational Rehabilitation* monographs may be obtained from Vocational Psychology Research.

MIQ REFERENCES

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- Ace, M.E., & Dawis, R.V. (1974). Type of content, type of score, and response inconsistency in comparison measures of preference. *Educational and Psychological Measurement*, 34, 221-230.
- Ace, M.E., & Weiss, D.J. (1967). *Ipsativity and predictability*. Paper presented at the 75th annual convention of the American Psychological Association, Washington, DC.
- N=160** janitors and maintenance men, **N=165** machinists, **N=154** salesmen, given the MIQ. Comparison of the predictive validities of partially ipsative scores and experimentally derived purely ipsative scores from the MIQ; scale scores derived from purely ipsative data predict as well as the scale scores derived from partially ipsative data, using multiple correlations and normative criteria of satisfaction.
- Allen, C.T. (1971). The Minnesota Importance Questionnaire. *Vocational Evaluation and Work Adjustment Bulletin*, 4, 31-33.
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- Surveyed publishers of 11 popular inventories for changes taken or planned to eliminate sex bias.
- Awad, E.M. (1977). An empirical study of the theory of work adjustment in a large data processing environment (Doctoral dissertation, University of Kentucky, 1975). *Dissertation Abstracts International*, 38, 2897A.
- N=86**. Also used Minnesota Satisfaction Questionnaire (MSQ, Long form 1967), Minnesota Job Description Questionnaire (MJDQ), Minnesota Satisfactoriness Scales (MSS), BPII. Analysis: correlational; D square; job reinforcer differences.
- Balsley, I.W. (1979). A psychological battery approach to the assessment and evaluation of shorthand skills. *Balance Sheet LVI, I*, 13-20.
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- Betz, E.L. (1969). Need-reinforcer correspondence as a predictor of job satisfaction. *Personnel and Guidance Journal*, 47, 878-883.
- N=186** female discount store employees (67 checkout cashiers, 47 checker-markers, 72 salesclerks) were administered the MIQ (pair comparisons), Minnesota Satisfaction Questionnaire (MSQ, Long Form 1967) and the Minnesota Job Description Questionnaire (MJDQ, multiple rank orders pair comparison). Analysis was by establishing measures of correspondence between MIQ and MJDQ scores for each individual using Spearman's Rho, D-statistic, and standard deviation, standard error and quartile measures. Phi correlations between correspondence measures and MSQ scores yielded correlations as high as .45; "hit rates" as high as .73.

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- Borgen, F.H., & Weiss, D.J. (1968). An application of the method of multiple rank orders to the scaling of environmental characteristics (Summary). *Proceedings of the 76th annual convention of the American Psychological Association*, 197-198.
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- Borgen, F.H., Weiss, D.J., Tinsley, H.E.A., Dawis, R.V., & Lofquist, L.H. (1972). *Occupational reinforcer patterns I* (rev. ed.). Minneapolis, MN: University of Minnesota, Vocational Psychology Research.
A description of the development and use of the reinforcer characteristics of 81 occupations.
- Borgen, F.H., Weiss, D.J., Tinsley, H.E.A., Dawis, R.V., & Lofquist, L.H. (1968). The measurement of occupational reinforcer patterns. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXV).
- Buchanan, J.C. (1972). The relationship between vocational need and ability types (Doctoral dissertation, University of Minnesota, 1972). *Dissertation Abstracts International*, 33, 4990B.
- Burnickas, A.A. (1973). A study of the relationship between selected personal variables and the vocational need profiles of a sample of school and college counselors (Doctoral dissertation, American University, 1973). *Dissertation Abstracts International*, 34, 3053A.
- Cheney-Stern, M.R. (1978). Effects of prevocational education on self-estimates and test-estimates of vocational needs and capacities of selected male inmates (Doctoral dissertation, University of Minnesota, 1977). *Dissertation Abstracts International*, 38, 7239A.
- Christie, A.L. (1977). *Job satisfaction for missile combat crew members*. Report #0450-77, Air Command Staff College, Air University, Maxwell Air Force Base, Alabama.
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N=362 vocational teachers administered the MIQ, the Minnesota Satisfaction Questionnaire (MSQ, Long Form, 1967), and the Minnesota Job Description Questionnaire (MJDQ). Analysis of data was by ANOVA.

- Culha, M. (1974) *Needs and satisfactions of foreign students at the University of Minnesota*. Unpublished doctoral dissertation, University of Minnesota.
- N=130** Adaptation: FSIQ; also used adapted Minnesota Satisfaction Questionnaire (FSSQ). Analysis: correlational; intercorrelation matrix of FSSQ scales.
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- Daww, D.C. (1965). Life experiences, vocational needs and choices of original thinkers and good elaborators (Doctoral dissertation, University of Minnesota, 1965). *Dissertation Abstracts International*, 26, 5223-5224.
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- Classifies 846 benchmark occupations and 923 alternative occupational titles, a total of 1769 occupations, in the form of 131 separate taxons. Occupational membership in a given taxon is determined by status of the occupation on two dimensions: ability requirements and reinforcer system. *Capable of classifying all DOT titles.*
- Dawis, R.V., England, G.W., & Lofquist, L.H. (1964). A theory of work adjustment. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XV).
- The original statement of the Theory of Work Adjustment with a discussion of research implications; relationship to vocational psychology concepts; and application to counseling, education, rehabilitation, retirement, and employment problems.
- Dawis, R.V., England, G.W., & Lofquist, L.H. (1968). A theory of work adjustment. In B. Hopson & J. Hayes (Eds.), *The theory and practice of vocational guidance*. Oxford: Pergamon Press.

Dawis, R.V., & Lofquist, L.H. (1978). A note on the dynamics of work adjustment. *Journal of Vocational Behavior*, 12, 76-79.

A systems-type model of the Theory of Work Adjustment is presented to depict the ongoing process of adjustment to work.

Dawis, R.V., & Lofquist, L.H. (1984). *A Psychological Theory of Work Adjustment*. Minneapolis, MN: University of Minnesota Press.

Most recent and complete statement of the Theory of Work Adjustment, its research instruments, and its application to the understanding of vocational and non-vocational behavior.

Dawis, R.V., & Lofquist, L.H. (1974). *The Minnesota occupational classification system*. Minneapolis, MN: University of Minnesota, Department of Psychology, Vocational Psychology Research, Work Adjustment Project.

A psychological taxonomy of work which groups occupations according to ability requirements (Occupational Aptitude Patterns) and reinforcer characteristics (Occupational Reinforcer Cluster Patterns). The taxonomy also provides information for each group (Taxon) of occupations on Data-People-Things worker functions, Holland Occupational Classification, and worker traits (interests, temperaments, and physical demands).

Dawis, R.V., & Lofquist, L.H. (1975). Toward a psychological taxonomy of work. *Journal of Vocational Behavior*, 7, 165-171.

A new approach to the construction of a psychological taxonomy of work is presented. The approach cross classifies occupations on the basis of ability requirements and reinforcer characteristics to develop psychological homogeneous groups of occupations.

Dawis, R.V., Lofquist, L.H., Henly, G.A., & Rounds, J.B., Jr. (1979). *Minnesota Occupational Classification System II*. Minneapolis, MN: University of Minnesota, Department of Psychology, Vocational Psychology Research, Work Adjustment Project.

Classifies 1161 occupations in the form of 78 taxons. Membership in a given taxon is based on the status of the occupation on two dimensions: ability requirements and reinforcer system.

Dawis, R.V., Lofquist, L.H., & Weiss, D.J. (1968). A theory of work adjustment (a revision). *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXIII).

A restatement of the Theory of Work Adjustment focusing on the central concept of correspondence between the individual and the work environment and on their continuing dynamic interaction.

D'Elia, G.P.M. (1975). The adjustment of library school graduates to the job environments of librarianship: A test of the need gratification and expectation fulfillment theories of job satisfaction (Doctoral dissertation, Rutgers-The State University, 1975). *Dissertation Abstracts International*, 36, 585A.

N=139 library school graduates employed as librarians for six months administered the MIQ, Minnesota Satisfaction Questionnaire (MSQ, Long form 1967), and Minnesota Job Description Questionnaire (MJDQ). Analysis of correspondence was by D-squared statistic.

Delorme, F., & Larouche, V. (1974). Measuring individual satisfaction in work: Development of a profile. *Revue de Psychologie Appliquee*, 24, 209-230.

N=50 persons matched for age, occupation, employer. Used N-Factors Questionnaire and 2 forms of the MIQ to derive a measure of work satisfaction.

Descombes, J.P. (1977). Role and meaning of the occupational or work values in vocational psychology today. *Revue de Psychologie Appliquee*, 27(4), 285-96.

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- DeWitt, L.J., & Weiss, D.J. (1969). Applications of circular triad data in individual measurement (Summary). *Proceedings of the 77th annual convention of the American Psychological Association, 4*, 147-148.
- Dressler, R.M. (1968). Relationships among needs, interests, and curricular choice in a sample of college men (Doctoral dissertation, Temple University, 1968). *Dissertation Abstracts International, 30*, 1356B.
- Döering, M., Rhodes, S.R., & Kaspin, J. (1988). Factor structure comparison of occupational needs and reinforcers. *Journal of Vocational Behavior, 32*(2), 127-138.
N=189 public school teachers. Also used Minnesota Job Description Questionnaire (MJDQ). Extracted 3 factor solutions for MIQ, MJDQ.
- Dunn, D.J., & Allen, T. (1973). Vocational needs and occupational reinforcers of vocational evaluators. *Vocational Evaluation and Work Adjustment Bulletin, 6*, 22-28.
N=61 vocational evaluators. Also used Minnesota Job Description Questionnaire (MJDQ). Found substantial congruence between available and desired reinforcers.
- Dunn, D.J., Allen, C.T., & Mueller, J. (1973). *Vocational needs, occupational reinforcers, job satisfaction, and job turnover among vocational evaluators*. Menomonie, WI: University of Wisconsin-Stout, Stout Vocational Rehabilitation Institute, Research and Training Center.
- Dupont, J.B., & Leresche, G. (1981-1982). Definition et mesure des valeurs professionneees chez les futurs bacheliers. (Definition and measurement of work values among future college graduates.) *Bulletin de Psychologies, 35*(355), 449-471.
N=519 college students. Also used Work Values Inventory. Found variety of duties and high quality interpersonal relations ranked highest, work autonomy ranked higher than security by females than males, taking it easy on the job ranked lowest with all students.
- Eberly, R.E. (1980). *Biographical determinants of vocational values*. Unpublished doctoral dissertation, University of Minnesota.
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N=404. Also used Minnesota Satisfaction Questionnaire (MSQ, Short form 1967), Closure Job Satisfaction Questionnaire. (**N=106** analyzed for MSQ). Analysis: correlational.
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N=165 social workers. Also administered Minnesota Satisfaction Questionnaire (MSQ, Long form 1967). Analysis of data by canonical correlation.
- Engdahl, B.E. (1980). *The structure of biographical data and its relationships to vocational needs and values*. Unpublished doctoral dissertation, University of Minnesota.

Faurot, L.M. (1973). An investigation of the validity of vocational student grades as a criterion of vocational student success and the predictability of vocational student grades using standardized test instruments (Doctoral dissertation, University of Minnesota, 1973). *Dissertation Abstracts International*, 34, 676A.

Used MIQ (30 scale form), Minnesota Satisfaction Questionnaire (MSQ), Minnesota Satisfactoriness Scales (MSS), General Abilities Test Battery (GATB), 16 Personality Factors (16PF), Vocational Development Inventory, MSAT, Grade Point Average collected 1966-1968 by vocational-technical schools. This was a six year University of Minnesota Project MINI-SCORE which investigated various measures of vocational student success to determine usefulness to counselors. Analysis was by determining zero order and multiple correlation coefficients between GPA and test scores

Fisher, S.T., Weiss, D. J., & Dawis, R. V. (1968). A comparison of Likert and pair comparisons techniques in multivariate attitude scaling. *Educational and Psychological Measurement*, 28, 81-94.

N=175 employed Work Adjustment Project participants (disabled/non-disabled in equal proportion), N=122 University of Minnesota college sophomores. Comparison of psychometric characteristics of Likert (a Likert 5-point scale form of the MIQ) and pair comparison methods (a 380 item pair comparisons form of the MIQ) of scaling techniques in the measurement of vocational needs, with the conclusion that pair comparison scales have the following advantages: a) mean scale scores were somewhat more centrally located, b) variability of the scale score distributions greater, c) scale distributions tended to be flat with no predominant direction of skew (Likert scale distributions tended to be negatively skewed and peaked, and d) scales tended to be more independent of each other. Both type of instruments were found to produce adequate scale reliabilities, with medians in the 80's.

Fitzgerald, S.M. (1972). A career development study of elementary school teachers (Doctoral dissertation, University of Minnesota, 1972). *Dissertation Abstracts International*, 33, 3452A-3543A.

N=136. Also used Minnesota Satisfaction Questionnaire (MSQ, Short form 1967). Analysis: correlational; descriptive; scale intercorrelations; gender differences; age differences.

Flint, P.L. (1980). *Sex differences in perceptions of occupational reinforcers*. Unpublished doctoral dissertation, University of Minnesota.

Fruehling, R.T. (1980). *Vocational needs and their life history correlates for high school students*. Unpublished doctoral dissertation, University of Minnesota.

Gay, E.G. (1971, August 20). *An introduction to the vocational counseling use of the Minnesota Importance Questionnaire*. Paper presented to the counseling staff of Concentrated Employment Program of Minneapolis, MN.

Gay, E.G., & Weiss, D.J. (1970). Relationship of work experience and measured vocational needs (Summary). *Proceedings of the 78th annual convention of the American Psychological Association*, 5, 663-664.

Gay, E.G., Weiss, D.J., Hendel, D.D., Dawis, R.V., & Lofquist, L.H. (1971). Manual for the Minnesota Importance Questionnaire. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXVIII).

A description of the development, use, and technical characteristics of the Minnesota Importance Questionnaire, a measure of vocational needs.

Golden, R.R., & Weiss, D.J. (1968). *Relationship of vocational satisfaction to the correspondence of job reinforcement and vocational needs* (Research Report No. 11). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.

N=179 employed adults (149 male, 30 female)-supervisory, research scientist, engineer, technician, and clerical/administrative employees in one company, were administered the MIQ (5-point Likert form), Minnesota Satisfaction Questionnaire (MSQ), and Job Description Questionnaire (JDQ, a 5-point Likert form). Correlations were obtained between instrument scales. MIQ-MSQ, and MIQ-JDQ correlations were low, while MSQ-JDQ correlations higher. Analysis by Variance Ratio Test, t-Test, and Bartlett's Test of homogeneity of variance yielded support for hypothesized increased worker satisfaction when correspondence existed between employee needs and job reinforcer levels.

Graen, G.B., Dawis, R.V., & Weiss, D.J. (1968). Need type and job satisfaction among industrial scientists. *Journal of Applied Psychology*, 52, 286-289.

N=113 industrial research and development scientists working in one facility. Used MIQ (rev. 1966), and MSQ (Long Form, rev. 1966). Q correlation matrix cluster analysis of preference (need) T-scores yielded one homogeneous group (N=32) and one heterogeneous group (N=81). Two way ANOVA yielded eight dimensions of significant group-need interaction: Security, Working Conditions, Company Goals, Authority, Company Image, Company Policies and Practices, Supervision-Human Relations, and Social Status. Hypothesized that these two groups represent "company" and "professional" orientation, respectively.

Gray, B.L. (1974). A longitudinal study of extracurricular activities, vocational needs, and individual vocational need stability during adolescence (Doctoral dissertation, University of Minnesota, 1974). *Dissertation Abstracts International*, 35, 5082B-5083B.

Gunnarsdottir, A. (1986). *The development of occupational reinforcer patterns for two occupations in Iceland, teachers and firefighters*. Unpublished master's thesis, University of Minnesota, Minneapolis, MN.

N=38 Firefighters, N=29 teachers. Translated to Icelandic and used MIQ, Minnesota Satisfaction Questionnaire (MSQ), and Minnesota Job Description Questionnaire (MJDQ); developed ORPs for both occupations.

Hendel, D.D. (1977). Behavioral validation of a vocational needs scale. *Applied Psychological Measurement*, 1, 307-308.

N=347 undergraduates. Those with higher need for Independence on the MIQ participated more frequently in individual activities

Hendel, D.D. (1977). Intransitivity on paired-comparisons instruments: The relationship of the total circular triad score to stimulus circular triads. *Applied Psychological Measurement*, 1, 403-411.

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- Hendel, D.D., & Weiss, D.J. (1970). *A comparison of MIQ and AVL profiles for applied and theoretical psychology graduate students* (Research Report No. 40). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.
- Hendel, D.D., & Weiss, D.J. (1970). Individual inconsistency and reliability of measurement. *Educational and Psychological Measurement*, 30, 579-593.
- Hendel, D.D., & Weiss, D.J. (1968). Individual response consistency and stability of measurement (Summary). *Proceedings of the 76th annual convention of the American Psychological Association*, 3, 249-250.
- N=180** high school seniors (111 female, 69 male) in vocational education programs. The extent to which the total circular triads (TCT) score in pair comparisons scaling can differentiate between individuals with respect to reliability of measurement was investigated. The Minnesota Importance Questionnaire (MIQ) was administered to the subjects and the TCT score was derived from the MIQ. The relationship between TCT and reliability was examined in terms of scale internal consistency reliability, scale test-retest reliability and individual test-retest profile stability. Results indicated that the TCT score can be used as the basis for predicting differential reliability of measurement for individuals: individuals with low TCT scores have more stable preference systems, while individuals with high TCT scores exhibit lower reliability of measurement.
- Hendel, D.D., & Weiss, D.J. (1970). Relationship of race and demographic characteristics to vocational needs profiles (Summary). *Proceedings of the 78th annual convention of the American Psychological Association*, 5, 351-352.
- Holm, C. (1976). Minnesota Importance Questionnaire: A translation for the deaf. *Journal of Rehabilitation of the Deaf*, 9(3), 13-21.
- Simplified the MIQ to reading level of grade 3.3.
- Huber, C.H. (1979). Career planning with mildly retarded students: a model for school counselors. *Vocational Guidance Quarterly*, 27, 223-229.
- Jenson, G., III. (1975). An application of a theory of work adjustment to selection for graduate training in school psychology (Doctoral dissertation, University of Minnesota, 1975). *Dissertation Abstracts International*, 37, 440B.
- Jury, P.A. (1977). The concept and function of importance in the satisfaction-importance relationship (Doctoral dissertation, University of Minnesota, 1976). *Dissertation Abstracts International*, 37, 5416B-5417B.
- Katz, M. (1969). Interests and values: A comment. *Journal of Counseling Psychology*, 16, 460-462.
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- Kauppi, D.R., & Weiss, D.J. (1967). The utility of the classification "mentally retarded" in vocational psychology (Summary). *Proceedings of the 75th annual convention of the American Psychological Association*, 2, 347-348.
- N=47** retarded individuals (mean IQ=75), **N=50** non-retarded individuals. Variance of scores on each of 20 vocational needs scores (from MIQ) is nearly as large as for non-retarded, and is greater where differences are statistically significant. This investigation of mentally retarded individuals on a set of vocationally relevant dimensions, including vocational needs, suggests that the classification "mentally retarded" is neither an effective nor an efficient classification system of vocational significance, and leads to errors of great significance to the clients.
- Kegerreis, J.P. (1977). Congruence between volunteers' and coordinators' vocational needs, personality factors, and activity (Doctoral dissertation, Texas Tech University, 1977). *Dissertation Abstracts International*, 38, 2834B.
- Keller, L.M. (1988). *Genetic and environmental factors associated with work values*. Unpublished doctoral dissertation, University of Minnesota.
- N=23** monozygotic, and **N=20** dizygotic reared apart twins. Also used MJDQ. Univariate and multivariate analysis indicate an average of 40% of the variability in work values is related to genetic factors, 60% to environmental and error factors.
- Kohlan, R.G. (1966). Relationship between inventoried interests and inventoried needs in a college sample (Doctoral dissertation, University of Minnesota, 1966). *Dissertation Abstracts International*, 27, 2397A.
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- Laney, J.C. (1973). Vocational needs of the Mexican American in South Texas (Doctoral dissertation, Texas Tech University, 1973). *Dissertation Abstracts International*, 34, 4668B.
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- Levy, M.F., Reichman, W., & Harrington, S. (1981). Abstinent alcoholics' adjustment to work. *Journal of Studies on Alcohol*, 42, 529-532.
- Levy, M.F., Reichman, W., & Harrington, S. (1979). Congruence between personality and job characteristics in alcoholics and nonalcoholics. *Journal of Social Psychology*, 107, 213-217.
- N=75** white male alcoholics and **N=75** nonalcoholic controls. Also used SCII, 16 PF, 4 TAT cards. No typical alcoholic personality emerged, but found better person-job match for nonalcoholics.
- Lichter, D.J. (1980). *The prediction of job satisfaction as an outcome of counseling*. Unpublished doctoral dissertation, University of Minnesota.
- Lofquist, L.H., & Dawis, R.V. (1969). *Adjustment to work*. New York: Appleton-Century-Crofts.
- An extended treatment of the Theory of Work Adjustment including discussion of its research basis and of the implications and applications of the theory.
- Lofquist, L.H., & Dawis, R.V. (1972). Application of theory of work adjustment to rehabilitation and counseling. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXX).

- Lofquist, L.H., & Dawis, R.V. (1970, September). *Assessing the work personalities of mentally retarded adults* (Final Report RD-2568-P). Minneapolis, MN: University of Minnesota, Department of Psychology.
- Lofquist, L.H., & Dawis, R.V. (1975). *Manual for the counseling use of the Minnesota Importance Questionnaire*. Minneapolis, MN: University of Minnesota, Department of Psychology, Vocational Psychology Research.
- Lofquist, L.H., & Dawis, R.V. (1978). Values as second-order needs in the theory of work adjustment. *Journal of Vocational Behavior*, 12, 12-19.
- Values are conceptualized, in the context of the Theory of Work Adjustment, as reference dimensions for the description of needs. Factor analysis of MIQ data are presented to identify six value dimensions: Safety, Comfort, Aggrandizement, Altruism, Achievement, and Autonomy.
- Lofquist, L.H., & Dawis, R.V. (1975). Vocational needs, work reinforcers, and job satisfaction. *The Vocational Guidance Quarterly*, 24, 132-139.
- A discussion of job satisfaction in the context of the Theory of Work Adjustment with focus on vocational needs and work reinforcers as the major components in the determination of worker satisfaction.
- Lustig, P., Lam, C.S., & Leahy, M. (1986). A conceptual approach to job placement with psychiatric and mentally retarded clients. *Journal of Applied Rehabilitation Counseling*, 17(1), 20-23.
- A conceptual structure of a position in terms of the needs of disabled clients and its relationship to scales of the MIQ are discussed.
- Lybarger, A.E. (1971). A comparison of job satisfaction needs of selected rural and urban industrial education students in the state of Utah (Doctoral dissertation, Utah State University, 1971). *Dissertation Abstracts International*, 32, 3746A.
- Macnab, D., & Fitzsimmons, G.W. (1987). A multitrait-multimethod study of work-related needs, values, and preferences. *Journal of Vocational Behavior*, 30(1), 1-15.
- N=438 postsecondary students. Also used Work Aspect Preference Scale, 2 scales assessing values. Found 8 traits accounted for more variance than 4 methods, suggesting instruments measuring highly similar constructs.
- Magee, M.C. (1976). Job success as a moderator variable in the prediction of job satisfaction: A test of the theory of work adjustment (Doctoral dissertation, Texas Tech University, 1976). *Dissertation Abstracts International*, 37, 2556B.
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- McGraw, M.J., & Bitter, J.A. (1974). Counselor perceptions of client vocational needs. *Rehabilitation Counseling Bulletin*, 18, 83-89.
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- Menz, F.E. (1978). *Levels of vocational needs and reinforcers in sheltered workshops*. Menomonie, WI: University of Wisconsin-Stout, Stout Vocational Rehabilitation Institute, Research and Training Center.
- Meresman, J.F. (1975). Biographical correlates of vocational needs (Doctoral dissertation, University of Minnesota, 1975). *Dissertation Abstracts International*, 36, 3579B.

- Meresman, J.F. (1976, September). *Biographical correlates of vocational needs*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
- Moline, J.G. (1974). Examination of multivariate relationships of work-value needs with reported antecedent determinants and concomitant correlates (Doctoral dissertation, University of Connecticut, 1974). *Dissertation Abstracts International*, 35, 7064A-7065A.
- Modal, T.A. (1971). *An investigation of the utilization of the Minnesota Importance Questionnaire*. Unpublished master's thesis, University of Wisconsin-Stout.
- Mueller, J. (1973). *Relationship between work reinforcers, vocational need, and reported job satisfaction for vocational evaluators*. Unpublished master's thesis, University of Wisconsin-Stout.
- Muncrief, M.C. (1973). Work adjustment of vocational education teachers (Doctoral dissertation, Ohio State University, 1973). *Dissertation Abstracts International*, 34, 2475A-2476A.
- Murray, S.G. (1981). Personality characteristics of adult women with low or high profiles on the SCII or SVIB occupational scales. *Journal of Applied Psychology*, 66, 422-430.
N=467 women. Also used California Psychological Inventory (CPI), Strong-Campbell Interest Inventory (SCII). Found significant differences on most of the SCII and SVIB scales relevant to women between groups that scored high on 9 CPI scales and 3 MIQ scales, and groups that scored low on the same scales.
- Murray, S.G. (1979). *Work personality characteristics of adult women with low and high profiles on the SCII or SVIB occupational scales*. Unpublished doctoral dissertation, University of Minnesota.
- Murray, S.G., Rounds, J.B., Jr., Dawis, R.V., & Lofquist, L.H. (1976, September). *The relationship between vocational needs and experiential factors*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
- Muthard, J.E., & Salomone, P.R. (1969). The roles and functions of rehabilitation counselors. *Rehabilitation Counseling Bulletin*, 13, 81-165.
- Nelson, R.G. (1964). Factors related to preferences for contract agreements covering selected conditions of employment for a group of professional employees (Doctoral dissertation, University of Minnesota, 1964). *Dissertation Abstracts International*, 26, 744-745.
- Novack, K.D. (1974). Preferred job reinforcers and the job satisfaction of faculty in Minnesota's Area Vocational Technical Institutes (Doctoral dissertation, University of Minnesota, 1974). *Dissertation Abstracts International*, 35, 7799A-7800A.
- Olson, H.L.T. (1974). The relationship between needs-reinforcer correspondence and job satisfaction of Minnesota secondary school office education teacher coordinators (Doctoral dissertation, University of Minnesota, 1974). *Dissertation Abstracts International*, 35, 7599A.
N=60 Minnesota secondary school office education teacher coordinators administered the MIQ, Minnesota Job Description Questionnaire (MJDQ), Minnesota Satisfaction Questionnaire (MSQ, Long form 1967) during 1973-1974 school year. Analysis was by t-Test, Chi-square, D-squared, and Pearson product-moment correlation.

- Pedro, J.D. (1984). Introduction into the workplace: The impact of internships. *Journal of Vocational Behavior*, 25(1), 80-95.
N=90 female business majors who had participated in a retailing internship. Also used Rokeach Value Survey, Career Orientation Scale, and Job Satisfaction Scale. Investigated attitudinal changes.
- Porritt, D. (1974). Applying a model for work adjustment. *Australian Psychologist*, 9, 165-173.
- Pucel, D.J., Nelson, H.F., Heitzman, D., & Wheeler, D.N. (1972). Vocational maturity and vocational training. *Journal of Industrial Teacher Education*, 9, 30-38.
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- Richardson, B.K. (1969). Prediction of rehabilitation counselor effectiveness: The relationship of counselor characteristics to supervisors' ratings (Doctoral dissertation, University of Iowa, 1969). *Dissertation Abstracts International*, 30, 3738A-3739A.
- Richardson, B.K., & Obermann, C.E. (1973). Relationship of rehabilitation counselor characteristics to supervisors' ratings. *Counselor Education and Supervision*, 13, 94-104.
- Rifkrind, L.J. (1973). Minnesota Importance Questionnaire. In D. G. Lake (Ed.), *Measuring human behavior*. New York: Teachers College Press.
- Rosen, S.D. (1975). A multivariate moderated prediction of job tenure (Doctoral dissertation, University of Minnesota, 1974). *Dissertation Abstracts International*, 35, 3836-3637B.
- Rosen, S.D., Hendel, D.D., Weiss, D.J., Dawis, R.V., & Lofquist, L.H. (1972). Occupational reinforcer patterns: II. *Minnesota Studies in Vocational Rehabilitation*, (Whole No. XXIX).
 A presentation of the reinforcer characteristics for an additional group of 67 occupations.
- Rounds, J.B., Jr. (1981). *The comparative and combined utility of need and interest data in the prediction of job satisfaction*. Unpublished doctoral dissertation, University of Minnesota.
- Rounds, J.B., Jr. (1976, April). *The MIQ: Development, reliability, and validity*. Paper presented at the annual convention of the American Personnel and Guidance Association, Chicago.
- Rounds, J.B., Jr., & Dawis, R.V. (1975, August). *A comparison of need-reinforcer correspondence indices as predictors of job satisfaction* (Research Report No. 48). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.
- Rounds, J.B., Jr., & Dawis, R.V. (1975, September). *A comparison of multiple rank order and paired comparison forms of the Minnesota Importance Questionnaire* (Research Report No. 49). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.
- Rounds, J.B., Jr., & Dawis, R.V. (1976, September). *Comparison of multiple rank order and paired comparison scaling techniques*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
- Rounds, J.B., Jr., Dawis, R.V., & Lofquist, L.H. (1977, August). *Biographical factors related to vocational needs: Sex differences*. Paper presented at the 85th annual convention of the American Psychological Association, San Francisco.

- Rounds, J.B., Jr., Dawis, R.V., & Lofquist, L.H. (1979). Life-history correlates of vocational needs for a female adult sample. *Journal of Counseling Psychology*, 26, 487-496.
N=290 female adults. Also used Biographical Information Form. Used double cross-validated design. Found hypothesized significant relationships between vocational needs and life history factors. The female prediction equations did not generalize to a male sample; only one MIQ subscale was accurately predicted.
- Rounds, J.B., Jr., Henly, G.A., Dawis, R.V., Lofquist, L.H., & Weiss, D.J. (1981). *Manual for the Minnesota Importance Questionnaire*. Minneapolis, MN: University of Minnesota, Department of Psychology, Vocational Psychology Research, Work Adjustment Project.
 Manual for users of the MIQ, describing the nature, purpose, administration, scoring, reporting of results, and counseling use and interpretation of the MIQ in both actuarial and clinical aspects.
- Rounds, J.B., Jr., Miller, T.W., & Dawis, R.V. (1978). Comparability of multiple rank order and paired comparison methods. *Applied Psychological Measurement*, 2, 413-420.
N=158 undergraduates retested after 1 week (3 stimuli per item block), **N=280** undergraduates retested after 2 days (5 stimuli per item block) in a counterbalanced study of the comparability of paired comparisons and multiple rank order presentation of the same stimuli. Results were found to be very similar, with the multiple rank order presentation requiring much less time.
- Rounds, J.B., Jr., Sloan, E.B., Dawis, R.V., & Lofquist, L.H. (1976, September). *Work Adjustment Project follow-up study: Preliminary findings*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
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- Salomone, P.R. (1968). Rehabilitation counselor behavior and vocational personality: Needs and work style (Doctoral dissertation, University of Iowa, 1968). *Dissertation Abstracts International*, 29, 1759A.
- Salomone, P.R., & Muthard, J.E. (1972). Canonical correlation of vocational needs and vocational style. *Journal of Vocational Behavior*, 2, 163-171.
- Scarpello, V. & Campbell, J.P. (1983). Job satisfaction and the fit between individual needs and organizational rewards. *Journal of Occupational Psychology*, 56(4), 315-28.
N=185 (164 male, 21 female) employees from two companies: 83% technical/scientific, 3% marketing, 4% business administration, 10% clerical. Administered MIQ, Minnesota Satisfaction Questionnaire (MSQ, Short form 1967), Minnesota Job Description Questionnaire (MJDQ), and a one-half hour interview. Analysis was by Pearson product-moment correlations between profiles, D-squared index to match needs to rewards and then correlating the need/reward match to overall satisfaction. Analysis included means, standard deviations, Chi square, Duncan's multiple range test. Table of mean satisfaction levels included.
- Seaburg, D.J., Rounds, J.B., Jr., Dawis, R.V., & Lofquist, L.H. (1976, September). *Values as second order needs*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
- Seiler, D.A., & Lacey, D.W. (1973). Adapting the work adjustment theory for assessing technical-professional utilization. *Journal of Vocational Behavior*, 3, 443-451.
N=197 engineers, **N=31** supervisors of the engineers. Also used Minnesota Job Description Questionnaire (MJDQ), Minnesota Satisfactoriness Scales (MSS). Found the three instruments useful in identifying job-individual mismatches, identifying jobs undesirable in terms of requirements and rewards, evaluating the effectiveness of organizational and personnel changes.

- Setne, V.L. (1972). Rehabilitation counselor variables in initial interview and assessment of client vocational needs (Doctoral dissertation, Texas Tech University, 1972). *Dissertation Abstracts International*, 33, 3922B.
- Shapiro, S. (1964). A study of the needs and satisfactions of social workers as perceived by college students and social workers (Doctoral dissertation, University of Minnesota, 1964). *Dissertation Abstracts International*, 26, 1174-1175.
- Sharac, J.S., Rounds, J.B., Jr., & Dawis, R.V. (1976, September). *Intransitivity and vocational needs*. Paper presented at the 84th annual convention of the American Psychological Association, Washington, DC.
- Shubsachs, A.P., Rounds, J.B., Dawis, R.V., & Lofquist, L.H. (1978). Perception of work reinforcer systems: factor structure. *Journal of Vocational Behavior*, 13(1), 54-62.
An investigation of the factor structure of 109 ORPs approximating the U.S. employed labor force. Three factors were identified that corresponded to the following MIQ values: Achievement-Autonomy, Safety-Comfort, and Altruism.
- Simpson, A.R. (1971). A comparison of selected characteristics of counselors leaving the State Rehabilitation Agency with counselors who stay (Doctoral dissertation, University of Iowa, 1971). *Dissertation Abstracts International*, 32, 4362A.
- Sloan, E.B. (1979). *An investigation of relationships between vocational needs and personality*. Unpublished doctoral dissertation, University of Minnesota.
- Steger, J.M. (1972). Prediction of the stability of vocational needs in adult males (Doctoral dissertation, University of Minnesota, 1972). *Dissertation Abstracts International*, 33, 5558B.
- Stewart, E.S., Greenstein, S.M., Holt, N.C., Henly, G.A., Engdahl, B.E., Dawis, R.V., Lofquist, L.H., & Weiss, D.J. (1986). *Occupational Reinforcer Patterns III*. Minneapolis, MN: University of Minnesota, Department of Psychology, Vocational Psychology Research, Work Adjustment Project.
Occupational reinforcer patterns for 185 occupations, and for each the DOT code, Occupational Aptitude Pattern, a list of reinforcers descriptive of the occupation, cross-references to other occupations in the same cluster of ORPs, and summary statistics on the development of that ORP.
- Stickney, P.D. (1978). *Vocational needs, occupational reinforcers, job satisfaction, and job turnover among work adjustment specialists*. Unpublished master's thesis, University of Wisconsin--Stout.
- Stone, G.V. (1970). The relationship between personality and work need-reinforcer correspondence (Doctoral dissertation, University of Minnesota, 1970). *Dissertation Abstracts International*, 31, 4346B-4347B.
- Stulman, D.A. (1974). Experimental validation of the independence and creativity scales of the Minnesota Importance Questionnaire (Doctoral dissertation, University of Minnesota, 1974). *Dissertation Abstracts International*, 35, 3075B-3076B.
- Stulman, D.A., & Dawis, R.V. (1976). Experimental validation of two MIQ scales. *Journal of Vocational Behavior*, 9, 161-167.
N=68 undergraduates. Validated 2 MIQ scales, Creativity and Independence.
- Taylor, P.G. (1971). Job description and employee needs related to satisfaction and satisfactoriness of teachers (Doctoral dissertation, University of Minnesota, 1971). *Dissertation Abstracts International*, 32, 2395A.

- Thorndike, R.M., & Weiss, D.J. (1983). An empirical investigation of step-down canonical correlation with cross-validation. *Multivariate Behavioral Research*, 18(2), 183-196.
N=500 males. Used MIQ and Minnesota Vocational Interest Inventory in a double cross-validation design, using step-down procedure.
- Thorndike, R.M., & Weiss, D.J. (1969, May). *An empirical investigation of stepwise canonical correlation*. Paper presented at the 42nd annual convention of the Midwestern Psychological Association, Chicago.
- Thorndike, R.M., & Weiss, D.J. (1973). A study of the stability of canonical correlations and canonical components. *Educational and Psychological Measurement*, 33, 123-124.
- Thorndike, R.M., Weiss, D.J., & Dawis, R.V. (1968). Canonical correlation of vocational interests and vocational needs. *Journal of Counseling Psychology*, 15, 101-106.
N=269 male undergraduates and **N=262** male DVR applicants were administered the SVIB and the MIQ. Canonical correlations between vocational interests and needs of .78 and .74 for the two groups respectively, support the conclusion that a high relationship exists between interests and needs.
- Thorndike, R.M., Weiss, D.J., & Dawis, R.V. (1967). Multiple relationships between measured vocational interests and measured vocational needs (Summary). *Proceedings of the 75th annual convention of the American Psychological Association*, 2, 351-352.
- Thorndike, R.M., Weiss, D.J., & Dawis, R.V. (1968). Multivariate relationships between a measure of vocational interests and a measure of vocational needs. *Journal of Applied Psychology*, 52, 491-496.
N=505 male DVR clients were administered the Minnesota Vocational Interest Inventory (MVII) and the MIQ. Cross validation of equations derived from canonical correlations between vocational interests and needs were 0.38, suggesting stable multivariate relationships between interests and needs.
- Tinsley, H.E.A., & Tinsley, D.J. (1977). Different needs, interests, and abilities of effective and ineffective counselor trainees: Implications for counselor selection. *Journal of Counseling Psychology*, 24, 83-86.
N=74 counselor trainees. Also used SCII, GATB. Found significant differences in the needs, interests, and abilities of effective, ineffective, and indeterminate trainees.
- Tinsley, H.E.A., & Weiss, D.J. (1971). A multitrait-multimethod comparison of job reinforcer ratings of supervisors and supervisees. *Journal of Vocational Behavior*, 1, 287-299.
- Tinsley, H.E.A., & Weiss, D.J. (1970, July). *Comparison of job reinforcer ratings of supervisors and supervisees* (Research Report No. 31). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.
- Tuttle, T.C., & Hazel, J.T. (1974, January). *Review and implication of job satisfaction and work motivation theories for Air Force research* (AFHRL-TR-73-56). Lackland Air Force Base, TX: Occupational Research Division, Air Force Human Resources Laboratory.
- Vandergoot, D. (1976). *An application of the theory of work adjustment to vocational counseling in a rehabilitation agency*. Unpublished doctoral dissertation, Michigan State University, Counseling & Personnel Services.

- Vessey, T.M. (1973). A longitudinal study of the prediction of job satisfaction as a function of the correspondence between needs and the perceptions of job reinforcers in an occupation (Doctoral dissertation, University of Minnesota, 1973). *Dissertation Abstracts International*, 34, 2352B-2353B.
- N=24.** Also used: Minnesota Satisfaction Questionnaire (MSQ, Short form 1967); Minnesota Job Description Questionnaire (MJDQ). Analysis: correlational.
- Warren, L.W. (1970). The prediction of job satisfaction as a function of the correspondence between vocational needs and occupational reinforcers (Doctoral dissertation, University of Minnesota, 1970). *Dissertation Abstracts International*, 32, 608B.
- N=104** phone operators, **N=180** phone service representatives, **N=220** vocational rehabilitation counselors. MIQ, Minnesota Job Description Questionnaire (MJDQ), Minnesota Satisfaction Questionnaire (MSQ, Short Form 1967) were administered. D squared statistic was used to determine need-reinforcer correspondence.
- Weiner, N.J. (1973). *Comparison, over time, of factors of importance to clerks in two organizations*. Unpublished master's thesis, University of Minnesota.
- Weiss, D.J. (1968, August). *Computer-assisted synthesis of psychometric data in vocational counseling*. Paper presented at symposium "Computers in Counseling," 76th annual meeting of the American Psychological Association, August 31, 1968. (Research Report No. 12). Minneapolis, MN: University of Minnesota, Department of Psychology, Work Adjustment Project.
- Rather than providing the counselor with an increase in the amount of information he must consider (a characteristic of most interpretive systems), synthesizing systems are oriented toward reducing the counselor's investment of time in mechanical data interpretation. Procedures for individualizing the process of vocational assessment were outlined with special emphasis on the measurement of vocational needs and abilities.
- Weiss, D.J. (1969, September). *Occupational reinforcers, vocational needs, and job satisfaction*. Paper presented at the 77th annual convention of the American Psychological Association, Washington, DC.
- Weiss, D.J. (1973). The Minnesota Importance Questionnaire. In D. G. Zytowski (Ed.), *Contemporary approaches to interest measurement*. Minneapolis, MN: University of Minnesota Press.
- Weiss, D.J., Dawis, R.V., England, G.W., & Lofquist, L.H. (1965). An inferential approach to occupational reinforcement. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XIX).
- Weiss, D.J., Dawis, R.V., England, G.W., & Lofquist, L.H. (1964). Construct validation studies of the Minnesota Importance Questionnaire. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XVIII).
- Weiss, D.J., Dawis, R.V., England, G.W., & Lofquist, L.H. (1966). Instrumentation for the theory of work adjustment. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXI).
- Weiss, D.J., Dawis, R.V., England, G.W., & Lofquist, L.H. (1964). The measurement of vocational needs. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XVI).
- Weiss, D.J., Dawis, R.V., Lofquist, L.H., & England, G.W. (1966). Instrumentation for the theory of work adjustment. *Minnesota Studies in Vocational Rehabilitation* (Whole No. XXI).
- Whelan, R.M. (1972). The effects of part-time employment upon the vocational need patterns of students enrolled in occupational business education programs (Doctoral dissertation, State University of New York at Buffalo, 1972). *Dissertation Abstracts International*, 33, 1089A.

- Willoughby, T.C. (1972). Are programmers paranoid? *Proceedings of the Annual Computer Personnel Research Conference*, 10, 47-54.
- Willoughby, T.C. (1970). Needs, interests, and reinforcer preferences of data processing personnel. *Proceedings of the Annual Computer Personnel Research Conference*, 8, 119-143.
- Willoughby, T.C. (1971). Needs, interests, reinforcer patterns and satisfaction of data processing personnel (Doctoral dissertation, University of Minnesota, 1971). *Dissertation Abstracts International*, 32, 5421A.
N=631. Also used Minnesota Satisfaction Questionnaire (MSQ, Long form 1967), Minnesota Job Description Questionnaire (MJDQ); Strong-Campbell Interest Inventory (SCII); Jurgensen Job Preference Blank. Analysis: need reinforcement and satisfaction level correlations.
- Woodruff, C.K. (1980). *Data processing people - are they satisfied/dissatisfied with their jobs?* Unpublished manuscript, Dept. of Business Administration, University of North Carolina at Greensboro, NC.
- Yuen, R.K.W., Tinsley, D.J., & Tinsley, H.E.A. (1980). The vocational needs and background characteristics of homemaker-oriented women and career-oriented women. *Vocational Guidance Quarterly*, 28, 250-256.
N=108 career-holding and N=60 homemaking women. Found separate analysis of vocational and situational factors failed to discriminate between the groups, but discriminant analysis of the two areas did discriminate. Different patterns of several needs by group are reported.
- Zytowski, D.G. (1973). Considerations in the selection and use of interest inventories. In D. G. Zytowski (Ed.), *Contemporary approaches to interest measurement*. Minneapolis, MN: University of Minnesota Press.
- Zytowski, D.G. (1970). The concept of work values. *The Vocational Guidance Quarterly*, 18, 176-186.

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