PERCEIVED ORGANIZATIONAL STRESSORS AND BURNOUT AMONG TEACHERS OF SELECTED SECONDARY GIRLS SCHOOLS IN KINTA DISTRICT, PERAK

A Thesis Submitted to the Graduate School of Universiti Utara Malaysia in Partial Fulfillment of the Requirements for the Degree of Master of Science in Management

LEONG Sow CHEW

SEKOLAH SISWAZAH UNIVERSITI **UTARA MALAYSIA**

August, 1995

Copyright © 1995 by Leong Sow Chew All rights reserved.

PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Post Graduate Degree from Universiti Utara Malaysia, I agree that the library of this University may make it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purposes may be granted by the Lecturer or Lecturers who supervised my thesis work, or in their absence, by the Dean of the Graduate School where my thesis was done. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use from any material in my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part, should be addressed to:

Dean of Graduate School
Universiti Utara Malaysia
06010 Sintok
Kedah Darulaman.

ABSTRAK

Hubungan Penekan Organisasi dengan Burnout bagi Guru-Guru di Sekolah Menengah Perempuan di Daerah Kinta, Per&

Leong Sow Chew Universiti Utara Malaysia, 1995.

Tujuan utama kajian ini ialah menyiasat hubungan di antara burnout guru dengan empat penekan organisasi: konflik peranan, kekaburan peranan, bebanan peranan, dan kekurangan sokongan pentabiran. Sampel yang digunakan ialah guruguru terlatih yang berpengalaman mengajar sekurang-kurangnya satu tahun, dan sedang berkhidmat di sekolah menengah perempuan di daerah Kinta, Perak. Sebanyak 472 soalselidik telah diedarkan kepada responden, tetapi hanya 395 soalselidik yang boleh digunakan dipulangkan kepada penyelidik.

Hasil utama dari kajian ini menunjukkan bahawa burnout guru adalah berhubung secara signifikan dengan penekan-penekan organisasi tersebut, dengan konflik peranan muncul sebagai penghubung yang paling kuat. Penekan-penekan organisasi secara berasingan didapati dengan signifikannya menerangkan varian (kelainan) dalam burnout. Ini memperlihatkan bahawa konflik peranan, kekaburan peranan, bebanan peranan, dan kekurangan sokongan pentadbiran boleh meramal burnout guru secara signifikan.

Apabila **empat** penekan organisasi itu dianalisis dengan regresi linear secara berperingkat, hanya konflik peranan, kekabumn peranan dan bebanan peranan

didapati menerangkan dengan signifikan varian dalam burnout. Ketiga-tiga pembolehubah ini didapati menerangkan secara signifikan 50.15% jumlah varian burnout. Pembolehubah kekurangan sokongan pentadbiran kelihatan tidak lagi menyumbangkan maklumat yang unik dalam ramalan burnout guru.

Penyiasatan yang lanjut menunjukkan pembolehubah demografi mempunyai kesan yang signifikan ke atas hubungan antara burnout dengan penekan-penekan organisasi. Apabila pembolehubah demografi: jantina, keturunan dan pengalaman mengajar, dimasukkan terlebih dahulu ke dalam regresi sebagai kawalan, didapati kekurangan sokongan pentadbiran menerangkan secara signifikan varian dalam burnout, selain daripada penekan-penekan peranan. Faktor keturunan responden kelihatan juga menjadi faktor yang signifikan dalam ramalan burnout guru. Kemasukan faktor-faktor demografi, khasnya faktor keturunan, kelihatan dapat mengubahkan hubungan antara burnout dengan penekan-penekan organisasi. Perkaitan di antara kesan keturunan ke atas burnout, dan keturunan dengan kekurangan sokongan pentadbiran tidak dapat diterangkan dalam kajian ini.

Inventori Burnout Guru yang digunakan dalam kajian ini adalah diubahsuaikan dari Maslach Burnout Inventory. Ia digunakan khususnya untuk meramal burnout guru. Konsistensi dalaman bagi Inventori Burnout Guru yang didapati dalam kajian ini adalah tinggi (Cronbach alpha = .9067). Apabila inventori ini dianalisis untuk menentukan pengumpulan faktornya, ia didapati mempunyai struktur tiga faktor yang sama sebagaimana yang terdapat dalam Maslach Burnout Inventory. Oleh itu, Inventori Burnout Guru boleh digunakan untuk mengukur burnout guru dalam konteks di Malaysia.

ABSTRACT

Perceived Organizational Stressors and Burnout among Teachers of

Selected Secondary G i r '1 's District. Perak

Leong Sow Chew Universiti Utara Malaysia.

The purpose of this study was to investigate the relationship of educator burnout with four selected organizational stressors: role conflict, role ambiguity, role overload, and lack of administrative support, among secondary school trained teachers with at least one year of instructional experience. The institutions sampled were all-girls schools situated in and near urban Ipoh. Of the 472 questionnaires distributed, 395 usable sets were returned for analysis.

The major result of the study shows that teacher burnout is significantly related to each of the four organizational stressors, with role conflict emerging as the strongest correlate. Individual organizational stressors were also found to significantly explain the variance in burnout. This indicates that role conflict, role ambiguity, role overload, and lack of administrative support can significantly predict burnout among teachers.

The results of the findings revealed that when considered in a **stepwise** multiple regression, only role conflict, role ambiguity, and role overload appear to significantly explain burnout variance, with lack of administrative support appearing to be redundant. The three role-related organizational stressors taken together were

found to explain about 50.15% of burnout variance. Lack of administrative support does not seem to contribute unique information about teacher burnout.

Three demographic variables: gender, ethnicity and teaching tenure were examined as possible moderators for teacher burnout. Investigation indicated that demographic variables have significant moderating effects on the relationship between burnout and the organizational stressors. After controlling for the demographic variables, it was found that lack of administrative support can significantly explain the variance in burnout, in addition to the role-related stressors. At the same time, ethnicity of the respondents was also found to significantly explain the burnout variance. It appears that with the introduction of demographic variables, lack of administrative support provides added information on the prediction of teacher burnout. The moderating effect of ethnicity on burnout, and its relationship to lack of administrative support cannot be explained in the present study.

The Teacher Burnout Inventory, which is a modified version of the Maslach Burnout Inventory especially for measuring educator burnout, was found to have a high internal consistency (Cronbach's alpha = .9067). On factor analyzing, the Teacher Burnout Inventory was found to possess similar three-factor structure as the Maslach Burnout Inventory's. This implies that the Teacher Burnout Inventory appears to be applicable and replicable for studying educator burnout in Malaysia.

in as much as
the results of the
study are limited
to the secondary
school leachers of
Kinta, Perak and
cones not as yet
he generalized to
all sec. Ich Ceachers.

ACKNOWLEDGMENTS

I am indebted to my supervisor, Prof. Dr. Milandre "Nini" **Bugarin Rusgal**, for her invaluable insight, professional advice, scholarly guidance and easy availability in the completion of the thesis; and to Miss Aizzat Hj. Mohd. Nasurdin for her commitment in reading the thesis.

Appreciation is also extended to Assoc. Prof. Dr. Ibrahim **Abdul-Hamid**, the Dean of the Graduate School, Universiti Utara Malaysia, for his consideration, understanding, and continued support.

I am especially grateful to Dr. Ibrahim Ahmad Bajunid, the Director of Institut Aminuddin Baki, Genting Highlands, whose vision of seeing more professionally equipped education managers in schools has made possible my study leave at the university. Special word of appreciation is also directed to the Ministry of Education for the opportunity of opening access to secondary school teachers to earn their master's degree.

Appreciation is also extended to the teachers and principals of schools who participated in the study, and to all those unmentioned who have helped me in their own special ways.

Finally, my greatest appreciation goes to members of my family for their sacrifice, unfailing patience and persistent encouragement. Their love and care have mitigated much of the toil and pain in completing the thesis.

TABLE OF CONTENTS

Permission to use	1
Abstrak (Abstract in Bahasa Malaysia)	ii
Abstract_	iv
Acknowledgements	vi
Table of Contents	vii
List of Tables	X
List of Figures	xii
Chapter I	
1.0 Introduction	1
1.1 Context of the Problem	1
1.2 Statement of the Problem	5
1.3 Purpose of the Study	5
1.4 Research Questions	5
1.5 Research Hypotheses	6
1.6 Significance of the Study	7
1.7 Delimitations of the Study	9
Chapter II	
2.0 Conceptual Framework	11
2.1 Review of Literature	11
2.1.1 Concept of burnout	11
2.1.2 Definitions of burnout	
2.1.3 The psychometry of burnout	14
2.1.4 Models of burnout	16

2.1.5 Antecedents and consequences of burnout	21
2.1.6 Teacher burnout	2 2
	27
2.3 Variables	28
Chapter III	
-	31
3.1 Type of Study	3 1
3.2 Unit of Analysis	
3.3 Population	
3.4 Sample and Sampling Technique	
3.5 The Respondents	3 2
3.6 Data Collection Techniques	
3.6.1 Instrument	3 4
3.6.2 Validity and reliability of the instrument	4 (
3.7 Data Analysis Technique	45
Chapter IV	
-	47
	47
	49
4.2.1 Distribution characteristics of teacher burnout	5(
4.2.2 Distribution characteristics of role ambiguity	
4.2.3 Distribution characteristics of role conflict	
4.2.3 Distribution characteristics of role overload	
4.2.4 Distribution characteristics of lack of administrative support	
4.2.5 Relationship between burnout and role ambiguity	
4.2.6 Relationship between burnout and role conflict	
4.2.7 Relationship between burnout and role overload	
4.2.8 Relationship between burnout and lack of administrative support	
4.2.9 Multiple regression analysis of burnout and four organizational variables	
4.2.10 Building the regression model	8

4.2.11 Multiple regression diagnostics	88
4.3 Discussion of the Findings	96
Chapter V	
5.0 Summary, Conclusions and Recommendations	98
5.1 summary	98
5.2 Conclusion	99
5.3 Recommendations	100
Bibliography	102
Appendix A: The Factor Structure of Teacher Bunrout Inventory	125
Appendix B: The Bilingual Questionnaires	129
Appendix C: Tables of Analysis	136
Appendix D: Correspondence	153
Vitae	160

LIST OF TABLES

Table 3.1: Cross-tabulation of respondent profile	32
Table 3.2: Statistics of teaching experience of respondents	33
Table 3.3: Measuring burnout: Emotional exhaustion	36
Table 3.4: Measuring burnout: Depersonalization	36
Table 3.5: Measuring burnout: Lack of personal accomplishment	37
Table 3.6: Measuring role ambiguity	37
Table 3.7: Measuring role conflict	38
Table 3.8: Measuring role overload	38
Table 3.9: Measuring lack of administrative support	39
Table 3.10: Analysis of items in the questionnaires	39
Table 3.11: Final Statistics of factor analyzing teacher burnout items	42
Table 3.12: Varimax-rotated factor matrix	44
Table 4.1: Summary statistics of stepwise linear regression for prediction of t	eacher
burnout	49
Table 4.2: Summary statistics of burnout	51
Table 4.3: Summary statistics of role ambiguity	55
Table 4.4: Summary statistics of role conflict	58
Table 4.5: Summary statistics of role overload	60
Table 4.6: Summary statistics of inadequate administrative support	62
Table 4.7: Summary regression statistics for burnout and role ambiguity	65
Table 4.8: Analysis of variance of burnout and role ambiguity	65
Table 4.9: Variables in the burnout-role ambiguity equation	66
Table 4.10: Summary regression statistics for burnout and role conflict	70
Table 4.11: Analysis of variance of burnout and role conflict	71
Tuble 1.11. Thirdy six of variance of burnout and fole commet	/1
Table 4.12: Variables in the burnout-conflict equation	

Table 4.14: Analysis of variance of burnout and role overload74
Table 4.15: Variables in the burnout-role overload equation
Table 4.16: Summary regression statistics for burnout and lack of administrative
support77
Table 4.17: Analysis of variance of burnout and lack of administrative support7
Table 4.18: Variables in the burnout-lack of administrative support equation7
Table 4.19: Summary statistics for the multiple regression model
Table 4.20: Statistics for variance in the multiple regression equation81
Table 4.2 1: Correlation matrix between burnout and organizational variables82
Table 4.22: Final statistics of stepwise linear regression with the organizational
variables85
Table 4.23: Summary statistics for stepwise selection
Table 4.24: Final statistics of stepwise regression with the demographic variables8 7
Table C 1: Correlation matrix of the 22 burnout items
Table C2: Initial statistics of factor analyzing teacher burnout
Table C3: The re-clustered items for the three dimensions of the Teacher Burnout
Inventory
Table C4: Analysis of responses to items in questionnaires
Table C5: Respondent profile according to schools
Table C6: Step 1 of the stepwise linear regression with organizational variables ···· 15
Table C7: Step 2 of the stepwise linear regression with organizational variables15 2

LIST OF FIGURES

Figure 2.1: The relationship between pressures and stress reactions	13
Figure 2.2: The Cherniss burnout process model	17
Figure 2.3: Leiter's regression model of burnout	.20
Figure 2.4: The relationship between organizational stressors and burnout2	8
Figure 3.1: Stem-and-leaf plot of years of teaching	.33
Figure 3.2: Factor scree plot for teacher burnout	43
Figure 4.1: Stem-and-leaf plot of teacher burnout	.51
Figure 4.2: Histogram of teacher burnout	.52
Figure 4.3: Boxplot for teacher burnout	53
Figure 4.4: Normal quantile-quantile plot of burnout	.54
Figure 4.5: Detrended normal quantile-quantile plot for burnout	.54
Figure 4.6: Stem-and-leaf plot of role ambiguity	5 6
Figure 4.7: Histogram of role ambiguity	56
Figure 4.8: Boxplot of role ambiguity	57
Figure 4.9: Stem-and-leaf plot of role conflict	58
Figure 4.10: Histogram of role conflict	59
Figure 4.11: Boxplot of role conflict	.59
Figure 4.12: Stem-and-leaf plot of role overload	.6 1
Figure 4.13: Histogram of role overload	.61
Figure 4.14: Boxplot of role overload	.62
Figure 4.15: Stem-and-leaf plot of lack of administrative support	63
Figure 4.16: Histogram of inadequate administrative support	.64
Figure 4.17: Boxplot of inadequate administrative support	.64
Figure 4.18: Regression line for burnout and role ambiguity	.67
Figure 4.19: Normal probability plot of standardized residuals for burnout-role	
ambiguity model	.69

Figure 4.20: Scatterplot of standardized residuals and predicted values of	burnout-
role ambiguity model	7 0
Figure 4.2 1: Regression line for burnout and role conflict	72
Figure 4.22: Normal probability plot of standardized residuals for burnout	-role
conflict model	73
Figure 4.23: Scatterplot of standardized residuals and predicted values of	bumout-
role conflict model	73
Figure 4.24: Regression line for burnout and role overload	75
Figure 4.25: Normal probability plot of standardized residuals for burnout	-role
overload model	7 6
Figure 4.26: Scatter-plot of standardized residuals and predicted values of	bumout-
role overload model	7 6
Figure 4.27: Regression line for burnout and lack of administrative support	ort7 8
Figure 4.28: Normal probability plot of residuals for burnout- lack of adm	ninistrative
support model	7 9
Figure 4.29: Scatter-plot of standardized residuals and predicted values of	burnout-
lack of administrative support model	8(
Figure 4.30: Stem-and-leaf plot of Studentized deleted residuals	89
Figure 4.3 1: Boxplot of Studentized deleted residuals	90
Figure 4.32: Quantile-quantile plot of Studentized deleted residuals	91
Figure 4.33: Scatterplot of Studentized deleted residuals and predicted val	ues of
burnout in multiple regression	91
Figure 4.34: Leverage for points in the multiple regression model	92
Figure 4.35: Sequence plot of Cook's distances	93
Figure 4.36: Standardized changes in the AMBIG coefficients	94
Figure 4.37: Standardized changes in the OVERLOAD coefficients	94
Figure 4.3 8: Standardized changes in the CONFLICT coefficients	95
Figure 4.39: Standardized changes in the LAS coefficients	95

Chapter I

Introduction

1.1 Context of the Problem

Burnout, a term originally coined by Freudenberger (1974), is commonly associated with human service professionals such as teachers. It broadly represents a response to the chronic emotional stress of dealing extensively with others in need (Maslach, 1982). To date, there is still no universally accepted definition of burnout.

A distinction has to be made between *stress* and burnout. Stress can have both positive and negative effects and in fact, a certain amount of stress is necessary to motivate action (Selye, 1976). In any human contact professions, stress is unavoidable, but burnout is not. Burnout can be regarded as the final step in a progression of unsuccessful attempts to cope with negative stress (Farber, 1984a). The negative stress reactions that preluded teacher burnout include apathy, displaced aggression on the pupils, feeling of exhaustion, frustration due to little sense of achievement, irritability and wanting to leave teaching (Dunham, 1992). Whatever the stress reactions, the victims are inevitably the pupils under their care.

The concern over substantial numbers of stressed and burned-out teachers has grown in recent years. There is mounting evidence that prolonged occupational stress can lead to both mental and physical ill-health, and can significantly vitiate the teacher-pupil relationship and the quality of teaching (Kyriacou, 1987). The Ministry of Education, educationists, and the general public have all expressed their

The contents of the thesis is for internal user only

Bibliography

(a) Books and Journals

- **Abramis**, D. J. (1994). Work role ambiguity, job satisfaction, and job performance: **Meta-analysis** and review. *Psychological Reports*, **75**, **14** 1 1 143 3.
- Abu-Hilal, M. M., & Salameh, K. M. (1992). Validity and reliability of the Maslach Burnout Inventory for a sample of non-western teachers. *Educational and Psychological Measurement*, 52, 161 169.
- American Psychological Association. (1983). *Publication manual for the American Psychological Association* (3rd ed.). Washington, DC: Author.
- Anderson, M. B., & Iwanicki, E. F. (1984). Teacher motivation and its relationship to burnout. *Educational Administration Quarterly*, **20(2)**, 94-1 32.
- Andrews, F. M., Klem, L., Davidson, T. N., O'Malley, P. M., & Rodgers, W. L. (1981). A guide for selecting statistical techniques for analyzing social science data. Ann Arbor, MI: University of Michigan Institute for Social Research.
- Arthur, N. M. (1990). The assessment of burnout: A review of three inventories useful for research and counseling. *Journal of Counseling & Development*, 69, 186-189.
- **Ashforth,** B. E. (1989). The experience of powerlessness in organizations. *Organizational Behavior and Human Decision Processes*, **43**, **207-242**.
- **Ashforth,** B. E., & Lee, R. T. (1990). Defensive behavior in organizations: A preliminary model. *Human Relations*, 43, 621-648.
- **Azham**, M. A. (1988). Curbing negative stress. *Malaysian Management Review*, **23(2)**, 5 1-62.
- Bacharach, S. B., Bauer, S. C., & Conley, S. (1986). Organizational analysis of stress: The case of elementary and secondary schools. *Work and Occupations*, 13, 7-32.
- **Balian,** E. S. (1982). How to design, analyze, and write doctoral research: The practical guidebook. Washington, DC: University Press of America.
- **Bardo,** P. (1979). The pain of teacher burnout: A case history. *Phi Delta Kappan*, 61, 252-254.

- Beck, C. L., & Gargiulo, R. M. (1983). Burnout in teachers of retarded and nonretarded children. *Journal of Educational Research*, 76, 169-1 73.
- Bedeian, A. G., & Armenakis, A. A. (1981). A path-analytic study of the consequences of role conflict and ambiguity. *Academy of Management Journal*, **24(2)**, 4 17-424.
- Beehr, T. A. (1976). Perceived situational moderators of the relationship between subjective role ambiguity and role strain. *Journal of Applied Psychology*, 6 1, **35-40**.
- Beehr, T. A. (1985). The role of social support in coping organizational stress. In T. A. Beehr and R. S. Bhagat (Eds.), *Human stress and cognition in organizations*. *New* York: Wiley.
- Belcastro, P. A., Gold, R. S., & Hays, L. C. (1983). Maslach Burnout Inventory: Factor structures for samples of teachers. *Psychological Reports*, *53*, *364-366*.
- Benjamini, Y. (1988). Opening the box of a boxplot. The American Statistician, 42(4), 257-262.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures, *Psychological Bulletin*, 88, 588-606.
- Berkowitz, E. N. (1980). Role theory, attitudinal constructs, and actual performance: a measurement issue. *Journal of Applied Psychology*, **65**, **240-245**.
- Blase, J. J. (1982). A social-psychological grounded theory of teacher stress and burnout. *Educational Administration Quarterly*, **18(4)**, 93-113.
- Blase, J. J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal*, **23(1)**, 13-40.
- Blase, J. J., Dedrick, C., & Strathe, M. (1986). School principals in relation to teacher stress, satisfaction, and performance. *Journal of Humanistic Education and Development*, 24(4), 159-169.
- Bloch, A. M. (1977). The battered teacher. Today's Education, 66, 58-62.
- Bollen, K. A., & Jackman, R. W. (1990). Regression diagnostics: An expository treatment of outliers and influential cases. In J. Fox and J. S. Long (Eds.), *Modern methods of data analysis* (pp. 257-291). Newbury Park, CA: Sage.
- Borg, M. G., & Riding, R. J. (1991). Occupational stress and satisfaction in teaching. British Educational Research Journal, 17(3), 263-281.
- Borysendo, J. (1987). *Minding the body, mending the mind.* New York: **Addison-**Wesley.
- Breaugh, J. A. (1980). A comparative investigation of three measures of role ambiguity. *Journal of Applied Psychology*, **65(5)**, *584-589*.

- Brenner, S-O., Sörbom, D., & Wallius, E. (1985). The stress chain: A longitudinal confirmatory study of teacher stress, coping and social support. *Journal of Occupational Psychology*, 58, 1-13.
- Brief, A. P., & Aldag, R. J. (1976). Correlates of role indices. *Journal of Applied Psychology*, **61(4)**, 468-472.
- Brief, A. P., & Atieh, J. (1987). Studying job stress: Are we making mountains out of molehills? *Journal of Occupational Behavior*, 8, 115-126.
- Brookings, J. B., **Bolton,** B., Brown, C. E., & **McEvoy,** A. (1985). Self-reported job burnout among female helping service professionals. *Journal of Occupational Behavior*, *6*, 143-150.
- Brubakar, D. L., & Simon, L. H. (1993). *Teacher as decision maker*. Newsbury Park: Corwin.
- Burke, R. J. (1989). Toward a phase model of burnout: Some conceptual and methodological concerns. *Group & Organization Studies*, **14(1)**, 23-32.
- Burke, R. J., & Greenglass, E. R. (1988). Career orientations and psychological burnout in teachers. *Psychological Reports*, 63, 107-116.
- Burke, R. J., & Greenglass, E. R. (1989). Psychological burnout among men and women in teaching: An Examination of the Chemiss model. *Human Relations*, **42(3)**, 261-273.
- Byrne, B. M. (1991). The Maslach Burnout Inventory: Validating factorial structure and invariance across intermediate, secondary, and university educators. *Multivariate Behavioral Research*, **26**, **583-605**.
- Byrne, B. M. (1993a). Burnout: Testing for the validity, replication, and invariance of causal structure across elementary, intermediate, and secondary teachers. *American Educational Research Journal*, 3 1(3), 645-673.
- Byrne, B. M. (1993b). The Maslach Burnout Inventory: Testing for factorial validity and invariance across elementary, intermediate, and secondary teachers. *Journal of Occupational and Organizational Psychology*, 66, 197-2 12.
- Cahoon, A. R., & Rowney, J. I. (1984). Managerial burnout: A comparison by sex and level of responsibility. *Journal of Health and Human Resources Administration*, 7, 240-263.
- Campbell, J. P., Daft, R. L., & Hulin, C. L. (1982). Generating and developing research questions. Beverly Hills, CA: Sage.
- Canter, S. (1993). Statistical analysis: Stat of the art. PC Magazine, 12(9), 227-287.

- Caplan, R., & Jones, K. (1975). Effects of workload, role ambiguity and type A personality on anxiety, depression and heart rate. *Journal of Applied Psychology*, **60**, **7** 13-7 19.
- Carmines, E. G., & Zeller, R. A. (1985). *Reliability and validity assessment*. Beverly Hills, CA: Sage.
- Cedoline, A. J. (1982). *Job burnout in public education*. New York: Teachers College Press.
- Chambers, J. M., Cleveland, W. S., Kleiner, B., & Tukey, P. A. (1983). *Graphical methods for data analysis*. Boston: Duxbury.
- Chapman, D. W. (1983). Career satisfaction of teachers. *Educational Research Quarterly*, **7(3)**, 40-50.
- Charlton, T., & David, K. (eds.). (1989). *Managing misbehaviour*. London: Macmillan.
- Chemiss, C. (1980a). Professional burnout in human service organizations. New York: Praeger.
- Cherniss, C. (1980b). Staff burnout: Job stress in the human services. Beverly Hills, CA: Sage.
- Chemiss, C. (1992). Long-term consequences of burnout: An exploratory study. Journal of Organizational Behavior, 13, 1-1 1.
- Claxton, G. (1989). Being a teacher: A positive approach to change, innovation and stress. London: Cassell.
- Cleveland, W. S., & McGill, M. E. (1988). *Dynamic Graphics for Statistics*. Pacific Grove, CA: Brooks/Cole.
- Cleveland, W. S., & McGill, R. (1984). The many faces of a scatterplot. *Journal of the American Statistical Association*, 79, 807-822.
- Cohen, J. (1977). Statistical power analysis for the behavioral sciences (Rev. ed.). New York: Academic Press.
- Cohen, **S., &** Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 3 10-357.
- Coldicott, P. J. (1985). Organizational causes of stress on the individual teacher. *Educational Management and Administration*, 13, 90-93.
- Cook, R. D., & Weisberg, S. (1982). Residuals and influence in regression. New York: Chapman and Hall.

- Cooper, C. & Marshall, J. (1976). Occupational sources of stress: A review of the literature relating to coronary heart disease and mental ill health. *Journal of Occupational Psychology*, 49, 1 1-28.
- Cooper, C. & Marshall, J. (Eds.). (1980). White collar and Professional stress. Chichester: John Wiley.
- Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of research on job burnout. *Academy of Management Review*, **18(4)**, 62 l-656.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, **78(1)**, 98-1 04.
- Cramer, D. (1994). Introducing statistics for social research: Step-by-step calculations and computer techniques using SPSS. London: Routledge.
- Crase, D. (1980). Antecedants of faculty frustration. *Journal of Psychology*, **66**, **303**-313.
- Cronbach, L. J. (1990). Essentials of psychological testing (5th ed.). New York: HarperCollins.
- Cunningham, W. G. (1983). Teacher burnout solutions for the 1980s: A review of the literature. *Urban Review*, 15, 37-5 1.
- Dawani, K., Kaylani, A., & Alayan, K. (1989). Levels of burnout among public school teachers in Jordan *Educational Journal*, **5**, **253-273**.
- Digman, J. T., Barrera, M., Jr., & West, S. G. (1986). Occupational stress, social support, and burnout among correctional officers. *American Journal of Community Psychology*, 14, 177-193.
- Duke, D. L. (1984). *Teaching: The imperiled profession. New* York: State University of New York Press.
- Dunham, J. (1992). Stress in teaching (2nd. ed.). London: Routledge.
- Dworkin, A. G. (1987). Teacher burnout in the public schools: Structural causes and implications for children. New York: State University of New York Press.
- Dworkin, A. G., Haney, C. A., & Telschow, R. L. (1988). Fear, victimization, and stress among urban public school teachers. *Journal of Organizational Behavior*, 9, 159-1 71.
- Edelwich, J., & Brodsky, A. (1980). Burnout: Stages of disillusionment in the helpingprofessions. New York: Human Sciences.
- Edgarton, S. K. (1977). Teachers in role conflict: The hidden dilemma. *Phi Delta Kappan*, 59, 120-122.

- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 7 1(3), 500-507.
- Emerson, J. D., & Hoaglin, D. C. (1983). Stem-and-leaf displays. In D. C. Hoaglin, F. Mosteller, and J. W. Tukey (Eds), *Understanding robust and exploratory data analysis* (pp. 7-32). New York: John Wiley.
- Evans, B. K., & Fischer, D. G. (1993). The nature of burnout: A study of the **three**-factor model of burnout in human service and non-human service samples. *Journal of Occupational and Organizational Psychology*, **66(1)**, 29-38.
- Farber, B. A. (Ed.). (1983). *Stress and burnout in the human service professions*. New York: Pergamon.
- Farber, B. A. (1984a). Stress and burnout in suburban teachers. *Journal of Educational Research*, **77(6)**, 325-33 1.
- Farber, B. A. (1984b). Teacher burnout: Assumptions, myths, and issues. *Teachers' College Record*, **86(2)**, 321-338.
- Farber, B. A. (1991). Crisis in education: Stress and burnout in the American teacher. San Francisco: Jossey-Bass.
- Farber, B. A., & Miller, J. (1981). Teacher burnout: A psycho-educational perspective. *Teacher College Record*, **83**, **235-244**.
- Fimian, M. J. (1984). The development of an instrument to measure occupational stress in teachers: The Teacher Stress Inventory. *Journal of Occupational Psychology*, **57**, **277-293**.
- Fimian, M. J., & Blanton, L. (1987). Stress, burnout, and role problems among teacher trainees and first-year teachers. *Journal of Occupational Behavior*, 8, 157-165.
- Fisher, C. D. & Gitelson, R. (1983). A meta-analysis of the correlates of role conflict and ambiguity. *Journal of Applied Psychology*, **68(2)**, 320-333.
- Fisher, H. J. (1983). A psychoanalytic view of burnout. In B. A. Farber (Ed.), Stress and burn-out in the human service professions (pp 40-45). New York: Pergamon.
- Fisher, S. (1994). Stress in faculty life: The mental assembly line. Buckingham: Open University.
- Fomey, D. S., Wallace-Schutzman, F., & Wiggers, T. (1982). Burnout among career development professionals: Preliminary findings and implications. *Personnel and Guidance Journal*, March, 435-439.
- Fox, J. (1990). Describing univariate distributions. In J. Fox and J. S. Long (Eds.), *Modern methods of data analysis* (pp. 58-125). Newbury Park, CA: Sage.

- Fox, J. (1991). Regression diagnostics. Newbury Park, CA: Sage.
- Fraenkel, J. R., & Wallen, N. E. (1993). How to design and evaluate research in education (2nd ed.). New York: McGraw-Hill.
- French, J. R. P., & Caplan, R. D. (1973). Organizational stress and individual strain. In A. J. Morrow (Ed.), *The failure of success* (pp. 30-66). New York: AMACOM.
- Freudenberger, H. J. (1974). Staff burn-out. Journal of Social Issues, 30, 159-165.
- Freudenberger, H. J. (1977). Burnout: The organizational menace. *Training and Development Journal*, 3 1(7), 26-27.
- Freudenberger, H. J. (1983). Burnout: Contemporary issues, trends, and concerns. In B. A. Farber (Ed.), *Stress and burnout in the human service professions* (pp 23-28). New York: Pergamon.
- Freudenberger, H. J., & Richelson, G. (1980). Burnout: The high cost of high achievement. Garden City, NY: Anchor.
- Friedman, I. A. (1991). High- and low-burnout schools: School culture aspects of teacher burnout. *Journal of Educational Research*, **84(6)**, *325-333*.
- Friedman, I. A., & Farber, B. A. (1992). Professional self-concept as a predictor of teacher burnout *Journal of Educational Research*, **86(1)**, 28-35.
- Friesen, D., & Sarros, J. C. (1989). Sources of burnout among educators. *Journal* of *Organizational Behavior*, 10, 179-188.
- Friesen, D., & Williams, M. J. (1985). Organizational stress among teachers. *Canadian Journal of Education*, 1 O(1), 13-34.
- Friesen, D., Prokop, C. M., & Sarros, J. C. (1988). Why teachers burn out. Educational Research Quarterly, 12, 9- 19.
- Frigge, M., Hoaglin, D. C., & Iglewicz, B. (1989). Some implementations of the boxplot. *The American Statistician*, 53(1), 50-54.
- Gaines, J., & Jermier, J. M. (1983). Emotional exhaustion in a high stress organization. *Academy of Management Journal*, **26**, **567-586**.
- Garden, A. (1987). Depersonalization: A valid dimension of burnout? *Human Relations*, **40(9)**, *545-559*.
- Gemmill, G., & Oakley, J. (1992). The meaning of boredom in organizational life. Groups and Organizational Management, 17(4), 358-369.
- Gmelch, W. H. (1993). Coping with faculty stress. Newsbury Park: Sage.

- Gold, Y. (1984). Burnout: A major problem for the teaching profession. *Education*, **104**, **271-274**.
- Gold, Y. (1985). The relationship of six personal and life history variables on three dimensions of the Maslach Burnout Inventory in a sample of elementary and junior high school teachers. *Educational and Psychological Measurement*, 45, 377-387.
- Gold, Y. (1987). Stress reduction programs to prevent teacher burnout. *Education*, **107(3)**, 338-340.
- Gold, Y., & Bachelor, P. (1988). Signs of burnout are evident for practice teachers during the teacher training periods. *Education*, **108(4)**, 546-555.
- Gold, Y., Bachelor, P., & Michael, W. B. (1989). The dimensionality of a modified form of the Maslach Burnout Inventory for university students in a teacher-training program. *Educational and Psychological Measurement*, 49, 549-561.
- Gold, Y., & Michael, W. (1985). Academic self-concept correlates of potential burnout in a sample of first semester elementary school practice teachers: A concurrent validity study. *Educational and Psychological Measurement*, 45, 909-914.
- Gold, Y., & Roth, R. A. (1993). Teachers managing stress and preventing burnout: the professional health solution. London: Falmer Press.
- Goldstein, R. (1989). Understanding numerical analysis: Working with the odds. *PC Magazine*, **8(5)**, *94-99*.
- Golembiewski, R. T. (1984). An orientation to psychological burnout: Probably something old, definitely something new. *Journal of Health and Human Resources Administration*, 7, 153-1 6 1.
- Golembiewski, R. T. (1986). The epidemiology of progressive burnout: A primer. Journal of Health and Human Resources Administration, 9, 16-37.
- Golembiewski, R. T. (1989). A note on Leiter's study: Highlighting two models of burnout. *Group & Organization Studies*, **14**(1), 5-13.
- Golembiewski, R. T., & Kim, B. S. (1989). Self-esteem and phases of burnout. *Organizational Development Journal*, 7(1), 51-58.
- Golembiewski, R. T., Munzenrider, R. (198 1). Efficacy of three versions of one burn-out measure: **MBI** as total score, **subscale** scores, or phases? *Journal of Health and Human Resources Administration*, **4**, **228-246**.
- Golembiewski, R. T., Munzenrider, R. (1983). Testing three phase models of burnout. *Journal of Health and Human Resources Administration*, **5**, **374-392**.

- Golembiewski, R. T., Munzenrider, R. (1984a). Phases of psychological burnout and organizational covariants: A replication from a large population. *Journal of Health and Human Resources Administration*, **6**, 290-323.
- Golembiewski, R. T., Munzenrider, R. (1984b). Active and passive reactions to psychological burnout: Toward greater specificity in a phase model. *Journal of Health and Human Resources Administration*, 7, 264-289.
- Golembiewski, R. T., Muruenrider, R. (1988). *Phases of burnout: Developments in concepts and applications*. New York: Praeger.
- Golembiewski, R. T., Munzenrider, R., & Phelan-Carter, C. (1983). Phases of progressve burnout and their work site covariants: Critical issues in OD research and practice. *Journal of Applied Behavioral Science*, **19**, **461-48** 1.
- Golembiewski, R. T., Munzenrider, R., & Stevenson, G. (1986). Stress in organizations: Toward a phase model of burnout. New York: Praeger.
- Golembiewski, R. T., & Scicchitano, M. (1983). Some demographics of psychological burn-out. *International Journal of Public Administration*, **5**, **435**-448.
- Goodall, C. (1983). Examining residuals. In D. C. Hoaglin, F. Mosteller, and J. W. Tukey (Eds), *Understanding robust and exploratory data analysis* (pp. 2 11-246). New York: John Wiley.
- Goodlad, J. L. (1984). A place culled school. New York: McGraw-Hill.
- Gorsuch, R. L. (1983). Factor analysis (2nd ed.). Philadelphia: Saunders.
- Grace, G. R. (1972). Role conflict and the teacher. London: Routledge and Kegan Paul.
- Green, D., & Walkey, F. (1988). A **confirmation** of the three-factor structure of the Maslach Burnout Inventory. *Educational and Psychological Measurement*, 48, 579-585.
- Greenberg, H. (1980). Coping with job stress. Englewood Cliffs, NJ: Prentice-Hall.
- Greenglass, E. R., & Burke, R. J. (1988). Work and family precursors of burnout in teachers: Sex differences. Sex *Roles*, 18, 215-229.
- Greer, J. G., & Wethered, C. E. (1984). Learned helplessness: A piece of the burnout puzzle. *Exceptional Children*, 50, 524-530.
- Hague, P. (1993). Questionnaire design. London: Kogan Page.
- Hakel, M. D., Sorcher, M., Beer, M., & Moses, J. L. (1982). Designing research with implementation in mind. Beverly Hills, CA: Sage.

- Hamilton, L. C. (1990). Modern Data Analysis: A First Course in Applied Statistics. Pacific Grove, CA: Brooks/Cole.
- Hamilton, L. C. (1992). Regression with graphics: A Second Course in Applied Statistics. Belmont, CA: Duxbury Press.
- Hamner, W. C., & Tosi, H. L. (1974). Relationship of role conflict and role ambiguity to job involvement measures. *Journal of Applied Psychology*, 59, 497-499.
- Handy, J. A. (1988). Theoretical and methodological problems within occupational stress and burnout research. *Human Relations*, 4 1, 35 1-369.
- Hartwig, F., & Dearing, B. E. (1985). *Exploratory data analysis*. Beverly Hills, CA: Sage.
- Harvey, S. H., & Raider, M. C. (1984). Administrator burnout. *Administration in Social Work*, **8**, **81-89**,
- Hatchard, D., & Thomas, E. B. (1987). Teacher stress and burnout: Myth or reality? *Practising Administrator*, 9(2), 42-48.
- Hays, W. L. (1994). Statistics (5th. ed.). Forth Worth: Harcourt Brace College.
- Hebb, D. (1972). Textbook of Psychology. Philadelphia: Saunders.
- Hendrickson, B. (1979). Teacher burnout: How to recognize it; what to do about it. *Learning*, **7**, **37-39**.
- Hoaglin, D. C. (1985). Using quantiles to study shape. In D. C. Hoaglin, F. Mosteller, & J. W. Tukey (Eds.), *Exploring data tables, trends, and shape* (pp. 417-460). New York: John Wiley.
- Hock, R. R. (1988). Professional burnout among public school teachers. *Public Personnel Management*, **17(2)**, **167-** 189.
- Holdaway, E. A, (1978). Facet and overall satisfaction of teachers. *Educational Administration Quarterly*, **14**, **30-47**.
- Holland, R. P. (1982). Special educator burnout. Educational Horizons, 60, 58-64.
- House, J. S. (1981). Work stress and social support. Reading, MA: Addison-Wesley.
- House, R. J., & Rizzo, J. R. (1972). Role conflict and ambiguity as critical variables in a model of organizational bahavior. *Organizational Behavior and Human Performance*, **7**, **467-505**.
- House, R. J., Schuler, R. S., & Levanoni, E. (1983). Role conflict and ambiguity scales: Reality or artifacts? *Journal of Applied Psychology*, **68**, **334-337**.

- Hubert, J. A., Garble, R. K., & Iwanicki, E. F. (1990). The relationship of teacher stress to school organizational health. In S. B. Bacharach (Ed.), *Advances in research and theories of school management and educational policy* (pp. 185-207). Greenwich: JAI.
- Hunter, J. E., Schmidt, F. L. (1990). *Methods of meta-analysis: Correcting errors and bias in research findings.* **Newbury** Park: CA: Sage.
- Hunter, J. E., Schmidt, F. L., & Jackson, G. B. (1982). *Meta-analysis: Cumulating researchfindings across studies*. Beverly Hills, CA: Sage.
- Iwanicki, E. F. (1983). Toward understanding and alleviating teacher burnout. *Theory into Practice*, **22**, **27-32**.
- Iwanicki, E., & Schwab, R. (1981). A cross validation study of the Maslach Burnout Inventory. *Educational and Psychological Measurement*, **41(4)**, 1167-1 174.
- Jackson, S. E. (1982). Participation in decision making as a strategy for reducing **job**-related strain. *Journal of Applied Psychology*, **68**, **3**-19.
- Jackson, S. E. (1984). Organizational practices for preventing burnout. In A. S. **Sethi**, & R. S. Schuler (Eds.), *Handbook of organizational stress coping strategies* (pp. 89-1 11). Cambridge, MA: Ballinger.
- Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36, 16-55.
- Jackson, S. E., Schwab, R. L., & Schuler, R. S. (1986). Towards an understanding of the burnout phenomenon. *Journal of Applied Psychology*, **71(4)**, 630-640.
- Jayaratne, S., & Chess, W. A. (1984). The effects of emotional support on perceived job stress and strain. *Journal of Applied Behavioral Science*, 20, 141-153.
- Johnson, T. W., & Stinson, J. E. (1975). Role ambiguity, role conflict, and satisfaction: moderating effects of individual differences. *Journal of Applied Psychology*, **60**, 329-333.
- Jones, J. W. (Ed.). (1981). *The burnout syndrome: Current research, theory, interventions.* Park Ridge, IL: London House.
- Jones, M. L. (1993). Role conflict: Cause of burnout or energizer? *Social Work*, **38(2)**, 136-141.
- Jöreskog, K. G., & Sörbom, D. (1979). Advances in factor analysis and structural equation modeling. Cambridge, MA: Abt.
- Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. *Canadian Psychology*, **29**, **284-297**.

- Kahn, R. L. (1973). Conflict, ambiguity and overload: Three elements in job stress. *Occupational Mental Health*, **3(1)**, 191-194.
- Kahn, R. L. (1978). Job burnout: Prevention and remedies. *Public Welfare*, **16**, **61**-63.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). Organizational Stress: Studies in Role Conflict and Role Ambiguity. New York: John Wiley.
- Keller, R. T. (1975). Role conflict and ambiguity: correlates with job satisfaction and values. *Personnel Psychology*, **28**, **57-64**.
- Keppel, G. (1991). Design and analysis: A researcher 's handbook. Englewood Cliffs, NJ: Prentice Hall.
- Kerlinger, F. N. (1979). Behavioral research: A conceptual approach. New York: Holt, Rinehart and Winston.
- Kerlinger, F. N. (1986). Foundations of behavioral research (3rd ed.). New York: Holt, Rinehart and Winston,
- Kerlinger, F. N., & Pedhazur, E. J. (1973). *Multiple regression in behavioral research. New* York: Holt, Rinehart and Winston.
- Kirmeyer, S. L., & Dougherty, T. W. (1988). Work load, tension, and coping: Moderating effects of supervisor support. *Personnel Psychology*, 4 1, 125-139.
- Kim, J. O., & Mueller, C. W. (1978a). Introduction to factor analysis: What it is and how to do it. Beverly Hills, CA: Sage.
- Kim, J. O., & Mueller, C. W. (1978b). Factor analysis: Statistical methods and practical issues. Beverly Hills, CA: Sage.
- Kleinbaum, D. G., Kupper, L. L., Muller, K. E. (1988). *Applied regression analysis and other muitivariate methods*. Boston: PWS-Kent.
- Kline, P. (1994). An easy guide to factor analysis. London: Routledge.
- Koeske, G. F., Kirk, S. A., Koeske, R. D. (1993). Coping with job stress: Which strategies work best? *Journal of Occupational and Organizational Psychology*, **66(4)**, 3 19-335.
- Kremer, L., & Hofman, J. E. (1985). Teachers' professional identity and burn-out. *Research in Education*, **34**, **89-95**.
- Kremer-Hayon, L., & Kurtz, H. (1985). The relation of personal and environmental variables to teacher burn-out. *Teaching and Teacher Education*, 1, 243-249.
- Kyriacou, C. (1980a). Coping actions and occupational stress among school teachers. *Research in Education*, 24, 57-61.

- Kyriacou, C. (1980b). Sources of stress among British teachers: The contribution of job stress and personality factors. In C. L. Cooper and J. Marshall (Eds.), White *collar andprofessional stress*, (pp. 113-128). Chichester: John Wiley.
- Kyriacou, C. (1981). Social support and occupational stress among schoolteachers. *Educational Studies*, **7(1)**, **55-60**.
- Kyriacou, C. (1987). Teacher stress and burnout: An international review. *Educational Research*, **29(2)**, 146-152.
- Kyriacou, C., & Pratt, J. (1985). Teacher stress and psychoneurotic symptoms. British Journal of Educational Psychology, 55, 61-64.
- Kyriacou, C., & Sutcliffe, J. (1978a). A model of teacher stress. *Education Studies*, 4, 1-6.
- Kyriacou, C., & Sutcliffe, J. (1978b). Teacher stress: Prevalence, sources and symptoms. *British Journal of Educational Psychology*, 48, **159-** 167.
- Kyriacou, C., & Sutcliffe, J. (1979). Teacher stress and satisfaction. *Educational Research*, 2 1, 89-96.
- Latack, J. C. (1986). Coping with job stress: Measures and future directions for scale development. *Journal of Applied Psychology*, 7 1, 3 77-3 85.
- Lazaro, C., Shinn, M., & Robinson, P. E. (1984). Burn-out, job performance, and job withdrawal behaviors. *Journal of Health and Human Resources Administration*, 7, 2 13-234.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.
- Lee, R. T., & Ashforth, B. E. (1990). On the meaning of Maslach's three dimensions of burnout. *Journal of Applied Psychology*, **75**, **743-747**.
- Lee, R. T., & Ashforth, B. E. (1993). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. *Organizational Behavior and Human Decision Processes*, **54(3)**, *369-398*.
- Lee, R. T., & Ashforth, B. E. (1993). A further examination of managerial burnout: Toward an integrated model. *Journal of Organizational Behavior*, **14**, **3-20**.
- Leiter, M. P. (1988). Burnout as a function of communication patterns: A study of a multidisciplinary mental health team. *Group and Organization Studies*, 13(1), 111-128.
- Leiter, M. P. (1989). Conceptual implications of two models of burnout: A response to Golembiewski. *Group and Organization Studies*, **14(1)**, 15-22.

- Leiter, M. P. (1990). The impact of family resources, control coping, and skill utilization on the development of burnout: A longitudinal study. *Human Relations*, **43**, 1067-1083.
- Leiter, M. P. (199 1). Coping patterns as predictors of burnout: The function of control and escapist coping patterns. *Journal of Organizational Behaviour*, 12, 123-144.
- Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior*, 9, 297-308.
- Leiter, M. P., & Meechan, K. A. (1986). Role structure and burnout in the field of human services. *Journal of Applied Behavioral Science*, 22, 47-52.
- Levinson, H. (1981). When executives burn out. *Harvard Business Review*, 59, 73-81.
- Lewis-Beck, M. **S.** (1988). **Applied regression: An introduction.** Beverly Hills, CA: Sage.
- Litt, M. D., & Turk, D. C. (1985). Sources of stress and dissatisfaction in experienced high school teachers. *Journal of Educational Research*, 78, 178-185.
- Lortie, D. *C.* (1975). *Schoolteacher: A sociological study.* Chicago: University of Chicago Press.
- MacNeill, D. (1982). The relationship of occupational stress to burnout. In J. W. Jones (Ed.), *The burnout syndrome: Current research, theory, interventions.* Park Ridge, IL: London House.
- Malanowski, J., & Wood, P. (1984). Burnout and self-actualization in public school teachers. *Journal of Psychology*, 117(1), 23-26.
- Marrow, A. J. (1973). **The failure of success. New** York: AMACOM.
- Marsh, H. W., & Shavelson, R. J. (1985). Self-concept: Its multifaceted hierarchical structure. *Educational Psychologist*, *20*, 107-123.
- Maslach, C. (1976). Burned-out. Human Behavior, 5, 16-22.
- Maslach, C. (1978a). How people cope. Public Welfare, 16, 56-58.
- Maslach, C. (1978b). The client role in staff burn-out. *Journal of Social Issues*, *34*, 111-124.
- Maslach, *C.* (1982a). *Burn-out The cost of caring.* Englewood Cliffs, NJ: Prentice-Hall.

- Maslach, C. (1982b). Understanding burnout: Definitional issues in analysing a complex phenomenon. In W. S. Paine (Ed.), *Job stress and burnout: Research. theory, and intervention perspectives* (pp 29-40). Beverly Hills, CA: Sage.
- Maslach, C., & Jackson, S. E. (1981a). The measurement of experienced burnout. Journal of Occupational Behavior, 2(2), 99-1 13.
- Maslach, C., & Jackson, S. E. (1981 b). The Maslach Burnout Inventory Manual. Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., & Jackson, S. E. (1982). After-effects of job-related stress: families as victims. *Journal of Occupational Behavior*, **3**, **63-77**.
- Maslach, C., & Jackson, S. E. (1984a). Burnout in organizational settings. In S. Oskamp (Ed.), *Applied social psychology annual: Applications in organizational settings*, Vol. 5 (pp.133-153). Beverly Hills, CA: Sage.
- Maslach, C., & Jackson, S. E. (1984b). Patterns of burnout among a national sample of public contact workers. *Journal of Health and Human Resources Administration*, 7, 189-2 12.
- Maslach, C., & Jackson, S.E. (1985). The role of sex and family variables in burnout. *Sex Roles.*, 12, 837-851.
- Maslach, C., & Jackson, S. E. (1986). *The Maslach Burnout Inventory Manual*. (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., & Pines, A. (1984). Burnout, the loss of human caring. In A. Pines and C. Maslach (Eds.), *Experiencing social psychology. New* York: Random House.
- McGrath, J. E. (1970). A conceptual formulation for research on stress. In J. McGrath (Ed.), *Social andpsychological factors in stress. New* York: Holt, Rinehart, Winston.
- McGrath, J. E. (1976). Stress and behavior in organizations. In M. D. Dunnett (Ed.), *Handbook of industrial and organizational psychology*. Chicago: **Rand**-McNally.
- McGuire, W. (1979). Teacher Burnout. Today's Education, 68, 37-39.
- McIntyre, T. C. (1984). The relationship between locus of control and teacher burnout. *British Journal of Educational Psychology*, **54**, **235-238**.
- McLaughlin, M. W., Pfeifer, R. S., Swanson-Owens, D., & Yee, S. (1986). Why teachers won't teach. *Phi Delta Kappan*, 67(6), 420-426.
- McMillan, J. H., & Schumacher, S. (1993). Research in education: A conceptual approach (3rd ed.). New York: HarperCollins.
- Meier, S. T. (1983). Towards a theory of burnout. Human Relations, 36, 899-910.

- Meier, S. T. (1984). The construct validity of burnout. *Journal of Occupational Psychology*, 57, 211-219.
- Miles, R. H. (1975). An empirical test of causal inference between role perceptions of conflict and ambiguity and various personal outcomes. *Journal of Applied Psychology*, 60(3), 334-339.
- Miles, R. H. (1976). A comparison of the relative impacts of role perceptions of ambiguity and conflict by role. **Academy of Management Journal**, 19(1), 25-35.
- Miles, R. H., & Perreault, W. D. (1976). Organizational role conflict: its antecedents and consequences. *Organizational Bahavior and Human Performance*, 17, 19-44.
- Miller, D. C. (1991). Handbook of research design and social measurement (5th ed.). Newbury Park, CA: Sage.
- Milstein, M. M., & Golaszewski, T. J. (1985). Effects of organizationally based and individually based stress management efforts in elementary school settings. *Urban Education*, 19(4), 389-409.
- Morris, J. H., & Sherman, J. D. (1981). Generalizability of an organizational commitment model. **Academy** of **Management Journal**, 24, 5 12-526.
- Moos, R. H., & Billings, A. G. (1982). Conceptualizing and measuring coping resources and process. In L. Goldberger and S. Breznitz (Eds.), *Handbook* of *stress: Theoretical and clinical aspects. New* York: Free Press.
- Mosteller, F., Siegel, A. F., Trapodi, E., & Youtz, C. (1985). Fitting straight lines by eye. In D. C. Hoaglin, F. Mosteller, & J. W. Tukey (Eds.), *Exploring data tables, trends, and shape* (pp. 225-239). New York: John Wiley.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Myrtle, R., Glogow, E., & Glogow, C. D. (1988). Stress among Malaysian Education Officials: Causes and coping methods. *Malaysian Management Review*, 23(3), 55-61.
- Nagy, S. (1985). Burnout and selected variables as components of occupational *stress. Psychological Reports*, *56*, 195-200.
- Needle, R. H., Griffin, T., Svendsen, R., Berney, C. (1980). Teacher stress: Sources and consequences. *Journal of School Health*, 50, 96-99.
- Norušis, M. J. (1993a). *SPSS for Windows: Base system user guide, release 6.0.* Chicago, IL: SPSS Inc.
- Norušis, M. J. (1993b). SPSS for Windows: Professional statistics, release 6.0. Chicago, IL: SPSS Inc.

- Norušis, M. J. (1993c). SPSS for Windows: Advanced statistics, release 6.0. Chicago, IL: SPSS Inc.
- Norušis, M. J. (1995). SPSS 6. I guide to data analysis. New Jersey: Prentice Hall.
- Norwack, K. M. (1987). Health habits, type A behaviour and job burnout. Work and Stress, 1, 135-142.
- Nunnally, J. C. (1978). Psychometric theory (2nd. ed.). New York: McGraw-Hill.
- Oppenheim, A. N. (1983). Questionnaire design and attitude measurement. London: Heinemann.
- Owens, R. G. (1991). *Organizational behavior in education* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Paine, W. S. (Ed.). (1982). Job stress and burnout: Research, theory, and intervention perspectives. Beverly Hills, CA: Sage.
- Paisey, A. (Ed.). (1983). The effective teacher. London: Ward Lock Educational.
- Pearce, J. L. (1981). Bringing some clarity to role a|mbiguity research. Academy of Management Review, 6,665674.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research* (2nd ed.). New York: Holt, Rinehart and Winston.
- Perlman, B., & Hartman, A. (1982). Burnout: Summary and future research. Human Relations, 35, 283-305.
- Pettegrew, L. S., & Wolf, G. E. (1982). Validating measures of teacher stress, *American Educational Research Journal*, 19, 373-396.
- Phillips, B. N., & Lee, M. (1980). The changing role of the American teacher: Current and future **souces** of stress. In C. L. Cooper, & J. Marshall (Eds.), White collar andprofessional stress, (pp. 93-1 11). Chichester: John Wiley.
- Pierce, C. M. B. & Molly, G. N. (1989). The construct validity of the Maslach Burnout Inventory: Some data from down under. *Psychological Reports*, 65, 1340-1342.
- Pierce, C. M. B. & Molly, G. N. (1990a). Biographic and psychological differences between secondary school teachers experiencing high and low levels of burnout. *British Journal of Educational Psychology*, **60**, **37-5** 1.
- Pierce, C. M. B. & Molly, G. N. (1990b). Relations between school type, occupational stress, role perceptions and social support. *Australian Journal of Education*, 34(3), 330-338.

- Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. (1989). Organization-based self-esteem: Construct definitions, measurement and validation. *Academy of Management Journal*, **32**, **622-648**.
- Pines, A., & Kafrey, D. (1978). Occupational tedium in the social services. *Social Work*, 23, 499-507.
- Pines, A., & Maslach, C. (1978). Characteristics of staff burnout in mental health settings. *Hospital and Community Psychiatry*, **29**, 233-237.
- Pines, A., & Maslach, C. (1992). Experiencing social psychology: readings and projects. (3rd ed.). New York: McGraw-Hill.
- Pines, A., Aronson, E., & Kafry, D. (1981). Burnout: From tedium to personal growth. New York: Free Press.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-report in organizational research: Problems and prospects. *Journal of Management*, **12**, **53** 1-544.
- Pretorius, T. B. (1994). Using the Maslach Burnout Inventory to assess educators' burnout at a university in South Africa. *Psychological Reports*, **75**, **771-777**.
- Pretty, G., McCarthy, M., & Catano, V. (1992). Psychological environments and burnout: Gender considerations within the corporation. *Journal of Organizational Behaviour*, 13, 701-711.
- Reid, K. (Ed.). (1980). Burnout and the helping professions. Kalamazoo: Michigan University Press.
- Reyes, P., & Imber, M. (1992). Teachers' perceptions of fairness of their workload and their commitment, job satisfaction, and morale: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 5, 291-302.
- Ricco, A. C. (1983). On coping with the stresses of teaching. *Theory into Practice*, **22**, **43-47**.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15, **150-** 163.
- Rosenthal, R. (1983). Meta-analysis: Towards a more cumulative social science. In L. **Bickman** (Ed.), *Applied social psychology annual*, Vol. 4 (pp. 65-93). Beverly Hills, CA: Sage.
- Rosse, J. G., Boss, R. W., Johnson, A. E., & Crown, D. F. (1991). Conceptualizing the role of self-esteem in the burnout process. *Group & Organization Studies*, 16(4), 428-45 1.
- Rottier, J., Kelly, W., & Tomhave, W. K. (1984). Teacher burnout small and rural school style. *Education*, 104(1), 72-79.

- Rountree, B. H. (1984). Psychological burnout in task groups: Examining the propositions that some task groups of workers have an affinity for burnout, while others do not. *Journal of Health and Human Resources Administration*, 7, 235-248.
- Rousseeuw, P. J., & Van Zomeren, B. C. (1990). Unmasking multivariate outliers and leverage points. *Journal of the American Statistical Association*, **85(411)**, 633-639.
- Russell, D. W., Altmaier E. & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. *Journal of Applied Psychology*, **72(2)**, 269-274.
- Sakharov, M., & Farber, B. A. (1983). A critical study of burnout in teachers. In B. A. Farber (Ed.), *Stress and burnout in the human service professions* (pp 65-81). New York: Pergamon Press.
- Sales, S. (1970). Some effects of role overload and role underload. *Organizational Behavior and Human Performance*, **5**, **592-608**.
- Sarason, S. B. (1977). Working, aging, and social change: Professionals and the one life-one career imperative. New York: Free Press.
- Samson, S. B. (1982). The culture of the school and the problem of change (2nd ed.). Boston: Allyn & Bacon.
- Sarros, J. C. (1988). Administrator burnout: Findings of future directions. *Journal* of *Educational Administration*, **26(2)**, 1 13.
- Sarros, A. M., & Sarros, J. C. (1990). How burned out are our teachers? A cross-cultural study. *Australian Journal of Education*, **34(2)**, 145-152.
- Sarros, J. C., & Sarros, A. M. (1992). Social support and teacher burnout. *Journal of Educational Administration*, 30(1), 55-69.
- Schaufeli, W. B., Maslach, C., & Marek, T. (Eds.). (1993). Professional burnout: Recent developments in theory and research. Washington, DC:Taylor & Francis.
- **Schön**, D. A. (1983). The reflective practitioner. New York: Basic Books.
- Schuler, R. S. (1975). Role perceptions, satisfaction, and performance: A partial reconciliation. *Journal of Applied Psychology*, **60(6)**, *683-687*.
- Schuler, R. S. (1977). Role perceptions, satisfaction, and performance moderated by organizational level and participation in decision making. *Academy of Management Journal*, **20(1)**, 159-165.
- Schuler, R. S. (1980). Definition and conceptualization of stress in organizations. Organization Behavior and Human Performance, 25, 184-2 15.

- Schwab, R. L., & Iwanicki, E. F. (1982a). Perceived role conflict, role ambiguity, and teacher burnout. *Educational Administration Quarterly*, **18(1)**, 60-74.
- Schwab, R. L., & Iwanicki, E. F. (1982b). Who are our burned out teachers? Educational Research Quarterly, 7(2), 5-1 6.
- Schwab, R. L., Iwanicki, E. F., & Pierson, D. A. (1983). Assessing role conflict and role ambiguity: A cross validation study. *Educational and Psychological Measurement*, 43, 587-593.
- Seidman, S. A., & Zager, J. (1987). The teacher burnout scale. *Educational Research Quarterly*, **7(1)**, 26-33.
- Sekaran, U. (1992). Research methods for business: A skill building approach (2nd ed.). New York: John Wiley.
- Seltzer, J., & Numerof, R. (1988). Supervisory leadership and subordinate burnout. *Academy of Management Journal*, 3 1, 439-446.
- Selye, H. (1974). Stress without distress. New York: Lippincott.
- Selye, H. (1976). The Stress of life (2nd ed.). New York: McGraw-Hill.
- Sethi, A. S., & Schuler, R. S. (Eds.) (1984). *Handbook of organizational stress coping strategies*. Cambridge, MA: Ballinger.
- Shirom, A. (1989). Burnout in work organizations. In C. L. Cooper and I. Robertson (Eds.), *International Review of Industrial and Organizational Psychology*. New York: John Wiley.
- Smithers, A., & Robinson, P. (1990). *Teacher loss*. Manchester University School of Education.
- Spector, P. E. (198 1). Research designs. Beverly Hills, CA: Sage.
- **Spence,** I., Lewandowsky, S. (1990). Graphical perception. In J. Fox and J. S. Long (Eds.), *Modern methods of data analysis* (pp. 257-291). Newbury Park, CA: Sage.
- Steers, R. M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly*, **22**, **46-56**.
- Tellenback, S., Brenner, S., & Löfgren, H. (1983). Teacher stress: Exploratory model building. *Journal of Occupational Psychology*, 56, 19-33.
- Tharenou, P., & Harker, P. (1982). Organizational correlates of employee self-esteem. *Journal of Applied Psychology*, 67, 797-805.
- Tosi, H., & Tosi, D. (1970). Some correlates of role conflict and role ambiguity among public school teachers. *Journal of Human Relations*, 18, 1068-1 079.

- Tracy, L., & Johnson, T. W. (1981). What do the role conflict and ambiguity scales measure? *Journal of Applied Psychology*, **66**, **464-469**.
- **Truch,** S. (1980). *Teacher burn-out and what to do about it.* **Novato,** CA: Academic Therapy.
- **Tuckman,** B. W. (1994). *Conducting educational research* (4th ed.). Fort Worth: Harcourt Brace College.
- Tuettemann, E., & Punch, K. F. (1992). Psychological distress in secondary teachers: Research findings and their implications. *Journal of Educational Administration*, 30(1), 42-54.
- Turk, D. C., Meeks, S., & Turk, L. M. (1982). Factors contributing to teacher stress: Implications for research, prevention, and remediation. *Behavioral Counseling Quarterly*, 2, 1-26.
- Valenzi, E., & Dessler, G. (1978). Relationships of leader behavior, subordinate role ambiguity and subordinate job satisfaction. *Academy of Management Journal*, 21, 671-678.
- Van Sell, M., Brief, A. P., & Schuler, R. S. (1981). Role conflict and role ambiguity: Integration of the literature and directions for future research *Human Relations*, 34(1), 43-71.
- Van Wagenen, R. K. (1991). Writing a thesis: Substance and style. Englewoods Cliffs, NJ: Prentice Hall.
- Velleman, P., & Wilkinson, L. (1993). Nominal, ordinal, interval, and ratio typologies are misleading. *The American Statistician*, **47**(1), 65-72.
- Walkey, F. H. (1983). Simple versus complex factor analyses of responses to multiple scale questionnaires. *Multivariate Behavioral Research*, **18**, **401-421**.
- Walkey, F. H., & Green, D. E. (1992). An exhaustic examination of the replicable factor structure of the Maslach Burnout Inventory. *Educational and Psychological Measurement*, 52, 309-323.
- Walsh, D. (1979). Classroom stress and teacher burnout. *Phi Delta Kappan*, **61**, **253**-258.
- Warnath, C., & Shelton, J. (1976). The ultimate disappointment: The burned out counselor. *Personnel and Guidance Journal*, **25**, **172-** 175.
- Washington, K. R. (1989). Controlling job stress: some tips for urban teachers. *School Organizations*, **9(3)**, *3* 15-3 18.
- Weisberg, J. (1994). Measuring worker's burnout and intention to leave. *International Journal of Manpower*, **15(1)**, 4-14.

- Weiskopf, P. (1980). Burnout among teachers of exceptional children. *Exceptional Children*, 47, 18-23.
- Welch, I. D., Medeiros, D. C., & Tate, T. A. (1982). Beyond burnout: How to enjoy your job again when you 've just about had enough. Englewood Cliffs, NJ: Prentice Hall.
- Wellington, J. (1986). The flight from physics teaching. *Physics Education*, 2 1(2), 103-106.
- Whetten, D. A. (1978). Coping with incompatible expectations: An integrated view of role conflict. *Administrative Science Quarterly*, 23, 254-271.
- Wolf, F. M. (1988). *Meta* analysis: Quantitative methods for research synthesis. Beverly Hills, CA: Sage.
- Wolpin, J., Burke, R. J., & Greenglass, E. R. (1991). Is job satisfaction an antecedent or a consequence of psychological burnout? *Human Relations*, **44(2)**, 193-209.
- Zabel, R., & Zabel, M. K., (1982). Factors in burnout among teachers of exceptional children. *Exceptional Children*, **49(3)**, 26 1-263.

(b) Documents

- Awang Had Salleh. (1993, March 14). Satisfied teachers serve better. Star, p. 23.
- Bhul Vindar Kaur. (1995, July 26). It's a dog's life for Malaysian teachers. New *Straits Time: Life & Times*, p. 5.
- Chua, K. (1994, April 8). Teachers these days are an unhappy lot. *New Straits Times*, p. 35.
- Double intake of trainee teachers to continue. (1994, July 20). New Straits Times, pt. 5, p. 6.
- Eu, M. (1995, August 17). Teaching line in dire need of an overhaul. [Letter to the editor]. *New Straits Times*, p. 13.
- **HMs,** teachers forced to take over clerical duties. (1995, February 7). New Straits Times, pt. 7, p. 11.
- Indiscipline among pupils on the rise. (1994, April 24). New Straits Times, pt. 1, p. 7.
- Jayamalar, A. (1995, March 30). Be humane, treat teachers as humans [Letter to the editor]. *Star*, p. 2.
- No correctional violence. (1993, February 8). New Straits Times, pt. 1, p. 12.
- Overworked teachers opt to retire early. (1993, June 7). New Straits Times, pt. 1, p. 1.

- Teachers learn how to teach each other. (1994, April 7). New *Straits Times*, **pt.** 5, p. 39.
- Teachers spend more time teaching, not clerical work. (1995, February 16). *Star*, pt. 2,p. 15.
- Temporary teachers worrisome, say MPs. (1993, May 6). Star, pt. 2, p. 10.
- Toh, S. B. (1993, March 28). Teachers with no place to call their *own*. *New Straits Times*, p. 28.
- **Toyad:** No danger from 'ill' teachers. (1992, December, 9). New Straits Times, pt. 2, p. 7.
- Vadivelu, V. G. (1995, August 2). Act against errant NRS appraisers. [Letter to the editor]. New *Straits Times*, pt. 7, p. 13.