



RESEARCH ARTICLE

Bangladeshi Canadian Employee Women Familial Decision-Making Practices in Toronto, Canada

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Abstract

Patriarchal values influence women's lifestyle and decision making autonomy in society although Canada promotes women liberation. Women generally possess low decision making power and are mainly dependent on masculine and/or familial decision making. Women decision-making power in the family is one of the criteria for women development and women empowerment in the family. The study looks at the status of Bangladeshi Canadian women familial decision-making practices in Toronto and the barriers they face to empower themselves in the decision-making process in their families. The survey was conducted face to face on February 23rd and 24th 2010 and the week of March 1st 2010 in Toronto. A total of 60 Bangladeshi Canadian women participated and were from the areas of Scarborough, and East York. Ninety percent of respondents have college/university education and the remaining 10% have high school education only. Twenty-three percent of women themselves make decisions about their day-to-day expenses, but only 17% of women control the income in the family. Sixty percent of women reported their opinions were considered 'very important' when buying furniture/electronic goods for the family. In decision making barrier, ethnic family values ranked highest (40%) followed by male dominance barriers are (20%). To overcome these decision making barriers, 47% women felt they needed support from all family members in terms of cooperation and participation in family decisions. Hence women familial decision-making practices in Toronto still influenced by their male partners and family values.

Keywords: *Cronbach alpha, Family expenditure, Household income, Income & expenditures decision making process, Patriarchy, Rasch model.*

Introduction

Bangladeshi Canadian women live with their husbands, parents and children in the multicultural society of Toronto. They are free to do jobs and earn income, buy goods, and educate themselves and their children. This study was designed to explore how Bangladeshi Canadian women make day-to-day familial decisions to meet the household needs in Toronto. The construct of the questionnaire contains women education and marital status background information, decision-making autonomy in day-to-day expenses, income control, level of autonomy in different traditional expenses like buying furniture, clothing etc., and the support women need to overcome barriers in making decisions in the family.

Construct Map

Visual representation of the construct is termed a construct map and ordering of the item responses is regarded as a construct continuum [1, 2]. I was very attentive to the survey item construct

because relevant items for the study are more likely to yield relevant responses and reporting of the items by the respondents [1, 3]. The survey respondents are Bangladeshi Canadian women citizens living in Toronto. The investigator made simple questions and avoided Wh-words questions in order to avoid increasing the load on respondents working memory. Each item contains multiple option responses. These answers are later coded according to the codebook and the data was punched into the SPSS program. Likert scale questions place importance of women's opinions into five categories, like women's opinions considered 'very important-5', 'important-4', 'somewhat important-3', 'less important-2' and 'not at all-1' [3-5]. All responses to the Likert scale items are in Table 3. I keep away from vague quantifiers [3,6,7] in the Likert scale.

Significance of the Study

Table 1: Distribution of women by education and marital status

Question	%	N
Education		
College/University	90.0	54
High School	10.0	6
Other	-	-
Marital Status		
Married	86.7	52
Unmarried	13.3	8
Other	-	-

Patriarchal values influence women's lifestyle and decision making autonomy in the society [8-12]. Women generally possess low decision making power and are mainly dependent on masculine and/or familial decision making [11,13,14,15]. However, women decision-making power in the family is one of the criteria for women development and women empowerment in the family. For the smooth running of a family, it is very important that equal status and equal power should be given to the basic constituents of family. Several researchers [14,16,17,18,19] found that women's equal participation in social, economic and political life play a pivotal role in the general process of the advancement of women. However, there are researches that challenge the extent to which women are empowered to make decisions in their families [13,19,20,21] because women are still suffering from subordination in the family from their male partners. Male dominance is sustained by patriarchal values, family traditions, religious customs and other factors influenced by and related to women familial decision-making practices in the family [9]. Although the decision making practices and powers in the family differ between women in developed and developing countries, however, women in both contexts have differential views, status and power in the family compared to their male partners [17]. In Bangladesh, patriarchal values, religious customs, and family values give females less decision-making power in both private and public spaces [10, 22, 23, 24].

Objectives of the Study

The study looks at the status of Bangladeshi Canadian women familial decision-making practices in Toronto and the barriers they face to empower themselves in the decision-making process in their families. This survey research is very important for the development of female empowerment because women's private space

(familial freedom) development is under threat [9,15,19,25], which is an important issue in women development and family harmony. However, there is no primary survey on this issue. Hence the main objective of this study is to conduct a short survey on Canadian Bangladeshi women familial decision making practices in Toronto to begin to fill this gap. In order to address the objective of this study a short questionnaire consisting of mainly closed-ended questions was developed. These items measured:

- Bangladeshi Canadian women's education and marital status to assess the social background of these women and to determine how social background influences their decision-making. It is expected that those women who report having more education may have more decision-making autonomy and those who are married may not have as much influence on the decision-making process;
- Decision making regarding day to day expenses and control income to find out who is responsible for the decisions in the household. These two items are critical as they directly relate to the decision making process in the family;
- Women's perceptions of the of importance of their opinion in basic standard decision making components (e.g., education, savings);
- Barriers women face in the decision-making process. Feminist literature [9,16,17,26,27] argues that male dominance, patriarchal values, family traditions, and religious customs (the Purdah system) are barriers for women decision making in the family. Therefore, this item examines what women themselves see as the main things that cause barriers for women trying to make decisions. For example, patriarchy hinders female autonomy in the decision making process and marginalizes them.
- Supports women need to be able to take part in the decision making process. To empower women in the family decision making process and to better be able to provide targeted support, it would be important to first determine what support they would need to overcome these decision making barriers. All these items have social desirability. None of them have invasion of privacy and risk of disclosure to items that assisted exclusion of misreporting to concern items by the women respondent.

Survey Administration

Before administering the survey to the target respondents, a small pilot face-to face interview was conducted to ensure that the items were appropriate. This resulted in slight changes to the structure and wording of items. The survey was

conducted face to face on February 23rd and 24th 2010 and the week of March 1st 2010 in Toronto. If I find backward telescoping in any item response, I double check with respondents and sometimes decompose questions to confirm the report to the items that they think. The study follows purposive sampling because the researcher selected only Bangladeshi Canadian women as participants of the study by going to a local grocery on Danforth Ave. where Bangladeshi Canadian women regularly shop and asking these women if they would be willing to participate in the survey. A total of 60 Bangladeshi Canadian women participated and were from the areas of Scarborough, and East York. I read the opinion scales aloud for the respondents for their think aloud, and eliminate vague items to understand the questions, remembering relevant information, producing an appropriate answer to avoid reporting errors and response effects errors in the survey [3,5,28]. I translate items into Bengali to minimize the language issue for those who may have a difficult time reading and comprehending English. It helps respondents choose the exact answers.

Analysis

Frequencies of all items on the survey were generated to explore the distribution of responses. Item analysis was conducted using (1) Construct Map 4.5 alpha to obtain Rasch parameter estimates and fit indices for each of the items and (2) PASW 18.0 (formerly SPSS) to examine the internal consistency of the scale (i.e., how consistently participants responded to the survey)[1,29].

Background Influences

Ninety percent of respondents have college/university education and the remaining 10% have high school education only (see Table 1). None are illiterate. The results show in details in Table -1 that the majority of women were married (87%) and 13 % unmarried.

Decision Making

Twenty-three percent of women themselves make decisions about their day-to-day expenses, but only 17% of women control the income in the family (see Table 2). Sixty-seven percent and 47% of respondents reported that all family members together make decisions in their day-to-day expenses and control income, respectively.

Importance of Decision Making

Table 3 presents the findings for the percentage of women reporting importance of their opinions in basic standard decision making components. Sixty

percent of women reported their opinions were considered 'very important' when consuming/buying furniture/electronic goods for the family. In the case of consuming/buying clothing, 70% felt their opinion was 'very important'. However, a smaller percentage of women felt that their opinions about their children's education (33%) and festival donations (31%) were considered 'very important,' although this is very low compared to the role they had in making other family decisions. Forty-six and 38% percent, respectively felt that their opinion in their children's education and festival donations were 'important'. Only 30% of women reported that their opinion about savings was 'very important' and slightly less (27%) felt it was important. Overall, women in this study were less likely to respond that their opinions were valued when it came to making decisions about savings. Saving is the lowest ranking in terms of other items.

Barriers and Support

In decision making barrier (see Table 4), ethnic family values ranked highest (40%) followed by male dominance barriers are (20%). Twenty-three percent of women also identified they were 'other' barriers that they face. Some of the other barriers cited were social environment, family disagreements, son preference by parents, less value for domestic chores and social reproductive works, and no mutual agreements, less practical experience to make decisions in the family. Domestic chores resulted women less time to think for proper decisions for the family. To overcome these decision making barriers, 47% women felt they needed support from all family members in terms of cooperation and participation in family decisions. They also need appreciation from their husbands and family members' support (37%). In the other category in 'women need support' item three women say society should give importance to the women's role in the family and give economic and social value/dignity to women's work in the family. This support could enhance women familial decision making power in the family. Girls' decision making practice should start from their childhood.

Reliability Measures

Only those five items which were used to examine the importance of women's opinions in the decision-making process will be used and were appropriate for the item analysis. All other variables described previously were to provide the study with additional information about the women in this survey especially as it relates to

their background (i.e., education and marital status) and their decision-making context.

Item Analysis

Item analysis refers to all the techniques used to assess the characteristics of the survey items. It evaluates the quality of the survey construction process [29]. The study uses the Rasch model to analyze the five Likert scale items related to importance of women's opinion in the decision making process. In the survey, respondents have higher results in the 'very important' and 'important' category in decisions about traditional things (buy clothing, furniture, electronic goods etc., which means that the particular expectation comes from these.

Internal Consistency

The results of this analysis show that the reliability of the scale used is quite low ($\alpha = 0.51$). Cronbach alpha is a measure of internal consistency that is how strongly items hang together. Although the value of Cronbach alpha in this study is less than .70, it is still acceptable given the number of items. Despite the low item-total correlation for children's education and savings given the importance of these questions to this research, I would want to retain these items. In addition, the sample of women who participated in this study had a very specific profile as they were all married and had post-secondary education, which is not representative of the population of Bangladeshi women because the women in this sample were affluent, highly educated, and skilled and employed in Bangladesh.

Item Analysis using Polytomous Rasch Model

These results are presented in this section. The items are polytomous, hence the partial credit measurement model was used. Similar to the results obtained for internal consistency the Cronbach alpha reported was also 0.51. The Wright map table shows on the left hand side the distribution of women's opinions in terms of the level of importance they place on the items. The right side of the graph characterizes items. Those at the upper end of the distribution believe their opinions in the decision making process are seen as important while those at the lower end believe their opinions in the decision-making process are not so important. The map shows that most women responded in the upper end of the distribution indicating that across items they felt their opinions were important. On the left hand side of the map is the distribution of the items (If we were thinking of a test, these items would be distributed from most difficult (upper end of

distribution) to least difficult (lower end of distribution); however, as this is an importance scale we are assessing women's perceptions of the importance of their opinions to a set of five items to what pattern of response was most common, the pattern(s) that was/were less common and the pattern(s) that was/were not represented. At the upper end of the distribution, we see a few women felt that their opinions about savings, children's education, and donations were very important; this was a rare occurrence in the data. In contrast, more common responses (i.e., 50% or more women responded in this way) were for furniture (very important), savings (important), donations (important), and clothing (very important). A response pattern less likely to be seen and which is at the lower end of the distribution, where women feeling that their opinions about clothing, children's education, and donations were moderately important.

Infit and Outfit Values and Graph

Infit and outfit are fit indexes, the ratio of the observed values and expected values. The infit and outfit results and infit and outfit chart helps to identify items that do not fit the model well. The dotted lines define the margin of good fit so anything in between is good. In interpreting the results for the infit and outfit estimates, the vertical columns of dots values of infit close to 1.00 and values of outfit between 0.75 and 1.33 are considered acceptable values for determining good model fit. When the infit numbers are low it shows a poor fit. The infit and outfit values both are around 1.0. The more similar the + values of these items are the better the fit is. The closer the infit is to the outfit, the better the data fits the model. In the infit and outfit chart, the *'s represent the infit mean square values for the item averages; those near the vertical column of |'s, indicating a value of 1.00, fit the model quite well. In the survey, the infit mean square values for clothing, saving, child education and festival donations fall within .75 and 1.33 indicating a good fit. For furniture it is slightly lower than .75, which indicates it is not a very good fit. It is unclear to me why furniture is slightly different. According to response theory [7,28,31,32,33] if the deviations are not particularly large, it is not justifiable to remove the item especially in case of highest value. Other misfit's problems could be due to the nature of the wording of the item. A better alternative would be to replace the single item at the vigorous (strong) level, but he suggests, if possible, examine all high-fit cases to ensure that the measurements are useful [1,7,32].

Table 2: Decisions regarding day-to-day expenses and income

Question	%	N
Day-to-day expenses		
Myself	23.3	14
Husbands, sons and/or parents	6.7	4
Husbands and children consult with me	3.3	2
All family members together	66.6	40
Income		
Myself	16.7	10
Husbands, sons and/or parents	33.3	20
Husbands and children consult with me	3.3	2
All family members together	46.7	28

Table 3: Percentage of Bangladeshi Canadian women reporting the importance of their opinion in basic consuming goods and standard decision making components

When your family makes decisions to buy...your opinions are considered	Not at all important	Somewhat important	Moderately Important	Important	Very Important	N
furniture/electronics goods	-	6.7	13.3	20.0	60.0	60
clothing	-	3.3	10.0	16.7	70.0	60
savings	6.7	10.0	26.7	26.7	30.0	60
children's education	-	4.2	16.7	45.8	33.3	48
festival donations	-	6.9	24.1	37.9	31.0	58

*Note a dash indicates that this response option was not chosen

Table 4: Decisions regarding day-to-day expenses and income

Question	%	N
Barriers		
Male dominance	20.0	12
Religious rituals	13.3	8
Ethnic family values	40.0	24
Myself to avoid making family decisions	3.3	2
Others	23.3	14
Support		
Appreciation from husband and other family members	36.7	22
Accept mistake	10.0	6
Cooperate and participate in discussions	46.7	28
Others	6.7	4

Use of the Study Findings/Results

It seems to me that the decisions for which Bangladeshi women living in Canada versus those in their native country have autonomy in family decision making are similar such as buying furniture, clothing and those for which they do not have autonomy in the case of savings is still to some extent a barrier for Canadian –Bangladeshi women. This is interesting as these women, while married, do have same higher education. Familial decisions have many components to them such as buying groceries, cooking, renting a house, buying cars and land, savings for RRSPs, the children's education, cars, house and life, and participating in different social gatherings like music, sports, the theatre, weddings, the children's marriage, religious festivals, street festivals, community activities, etc. However, the survey uses only five basic family decision making items to know the importance of the opinions of Bangladeshi Canadian women in the family, which are not enough to judge the overall level of a woman's empowerment in the family. However, the information gathered is still useful for informing the empowerment of women. Jahangir, Editor, *Bangla Kagoj*, a weekly news paper in Toronto claimed that there are sixty thousands Bangladeshi Canadians are living in Toronto [34]. The survey provides a space for these Bangladeshi women to re-think how they make familial decisions, which is one of their responsibilities in the family because the findings of the survey give indications about the pattern of the Bangladeshi-Canadian women familial decision-making practice in Toronto. This decision making process create awareness among these women and drives these women to be efficient in making decisions in the family. For example one woman respondent hopes such studies could bring awareness to women where the family is the basis for women's empowerment towards gender development; hence women should take initiative making decisions and lead the family. Moreover, this familial decision making process opens up alternatives in decision-making practice that are appropriate for them because many women (30%) are not independent from their male partners in savings decisions because male partners have more control over decisions in income and savings. Although in general most women were more likely to respond to opinions that were very important/important in decision-making process, only 30% women reported their opinion about savings was 'very important' which indicates that women still do not have autonomy in savings. Only 17% women themselves have control over income meaning that women have less voice in income and savings, which are very important for

women's empowerment, to get more economic freedom, and to have more of a voice in the family. Hence, Bangladeshi Canadian women need more autonomy in money management in the family. The survey results also state that ethnic family values are considered the highest (40%) barrier in decision-making practice in the family. Forty-seven percent of women felt they need support from all family members to make decisions in the family. Thirty seven percent of women reported they need appreciation from their husbands in the family. These findings indicate that patriarchal value (male dominance) is still prevalent and becomes a barrier for women's autonomy in the family. Women still depend on male decisions; therefore, they have no full freedom in making decisions in the family. The above survey findings can be communicated to the South Asian Support Services (SASS), South Asian Women Services (SAWS), and Bangladesh Community Support (BCS) in Scarborough, other Bangladeshi community offices and feminism advocacy groups in Toronto. These community offices can organize workshops with the Bangladeshi-Canadian women and with their male partners; discuss the findings with them and relate these findings to the women's empowerment and gender development issue. The community workers can explain the significance of the benefits of women's voices/autonomy/empowerment in decision making in the family and the implication of an increase of women's voices in decisions to liberate their freedom and drives their familial harmony, peace, and cohesiveness among family members. Women familial private space development through decision making autonomy could help women to develop their self-esteem and independence in their families, which can contribute to gender development among Bangladeshi Canadian women in Toronto. Previous discussion about the present study relates to the small number of items regarding women's opinions of the importance of the decision making process. Although, the results presented offer insight into the importance of this study for the empowerment of Bangladeshi-Canadian women the reliability and validity could be improved with the addition of more items that measure things for which men have greater autonomy and that also cover the range of things for which women's opinion are valued or not [29,35,36,37]. It is from this perspective that I will discuss below how to improve the validity.

Study 1:

Include more items that tap into the range of decisions that are made in the Bangladeshi community. Before pilot testing these items, have

an expert who is familiar with the field and the culture look at the items to determine if they are appropriate and cover most if not all of the aspects related to Bangladeshi decision making processes. After this process is completed, pilot test these items on a sufficiently large sample, run reliability analysis to explore internal consistency and whether the items are operating as expected.

Study 2

The ultimate goal of the survey is to be able to use the results to inform the empowerment of *Bangladeshi Canadian women* as a whole. However, the present study only focused on Bangladeshi Canadian women living in Toronto. So to ensure that this survey can be used with other Bangladeshi-Canadians in other provinces then it would be wise to also administer the survey to these women in other provinces and compare the results. By doing this I will be able to see whether the questions are interpreted similarly across samples and also whether the importance of women's opinions related to specific decision making components vary from province to province in Canada. In other words, if the results are similar from province to province then we know that the present survey results are a valid interpretation of Bangladeshi Canadian women's familial decision making processes and by extension empowerment.

Conclusion

References

- Bond TG, Fox CM (2001) Applying the Rasch model: Fundamental measurement in the human science. Mahwah, NJ: Lawrence Erlbaum Associates.
- Wilson M, Adams RJ (1995) Rasch models for item bundles. *Psychometrika*, 60:181-98.
- Tourangeau R, Rips LJ, Rasinski K (2000) The psychology of survey response. New York: Cambridge University Press.
- Construct Map 4.3 (2008) Computer program. Berkeley, CA BEAR Center, University of California.
- Guttman LA (1950) The basis of scalogram analysis. In SA Stouffer, LA Guttman, FA Suchman, PF Lazarsfeld, SA Star, JA Clausen (Eds), *Studies in social psychology in World War 11: Vol. 4. Measurement and prediction.* (pp. 60-90). Princeton University Press.
- Wright Map (2010). Retrieved from http://bearcenter.berkeley.edu/wiki/index.php/Wright_Map dated March 13, 2010.
- Wright BD, Masters, GN (1981) Rating scale analysis. Chicago: MESA Press.
- Antrobus P (2004) *The Global Women's Movement: Issues, Strategies and Challenges.* London: Zed Books.
- hooks b (1999) *Feminist Theory: From Margin to Centre,* Cambridge, M. A.: South End Press.
- Mahamud S (2004) Micro credit and women's empowerment in Bangladesh. In Saleuddin Ahamed & Muhammad Hakim (Eds.). *Attacking poverty with Micro Credit.* Dhaka University Press Limited and Palli Karma-Sahyak Foundation: 153-88.
- Kabeer N (1995) *Reversed Realities: Gender Hierarchies in Development Thought.* London: Verso Inc.
- Lord A (1984) The master's tools will never dismantle the master's house and age, race, class, sex: women redefining difference in sister outsider. NY. Crossing Press 110-23.
- Goetz M, Gupta S (1996) Who takes the credit gender, power and control over loan use in rural credit program in Bangladesh? *World Development* 24(1):45-63.

14. Jan M, Akter S (2008) An Analysis of Decision-Making Power among Married and Unmarried Women. *Kamla-Raj 2008: Stud. Home Comm. Sci.*, 2(1): 43-50. Retrieved from http://74.125.155.132/scholar?q=cache:rMED3kEFlKIJ:scholar.google.com/&hl=en&as_sdt=2000.
15. Kabeer N (2001) Conflicts over credit: re-evaluating the empowerment potential of loans to women in Bangladesh. *World Development* 29 (1):63-84.
16. Lord FM (1980) Applications of item response theory to practical testing problems. Hillsdale, NJ; Lawrence Erlbaum associates.
17. Mies Maria (1998) What is Feminism? Patriarchy & Accumulation on a World Scale: Women in the International Division of Labor. London: Zed Books 6-43.
18. Maria C (2001) Couples Participated in Reproductive Health Decision Making. Malrika: New Era Wlink Company.
19. Mayoux L (2009) Sustainable Learning for Women's Empowerment: Ways Forward in Microfinance. Herndon: Stylus Publishing.
20. Ditcher H, Harper M (2007) What's Wrong with Microfinance? Herndon: Stylus Publishing.
21. Rahman A (1999) Micro-credit initiatives for equitable and sustainable development: Who pays? *World Development* 27:1. Elsevier Ltd.
22. Abdullah AT, Zeidenstein SA (1982) Village Women of Bangladesh Prospects for Change. Oxford: Pergamon Press.
23. Mohanty C (2003) Feminism Without Borders: Decolonizing Theory, Practicing Solidarity. Durham, North Carolina: Duke University Press.
24. United Nations (2000) The World's Women: Trends and Statistics, United Nations Statistics Division, New York, NY.
25. Isserles RG (2003) The rhetoric of empowerment, the reality of development as usual. *Women's Studies Quarterly* 3 & 4:38-57.
26. Aujla A (2006) Others in their own land: second generation south asian canadian women racism and the persistence of colonial discourse. In andrea medovarski and brenda cranney (eds.). *Canadian Woman Studies* 20:2.
27. Dua E (1999) Introduction: Canadian Anti-Racist Feminist Thought: Scratching the Surface the of Racism. In Enakshi Dua and Angela Robertson (Eds). *Scratching the Surface: Canadian anti-racist feminist thought*. Toronto: Women Press, 7-31.
28. Embretson SE, Reise SP (2000) Item response theory for psychologists. Mahwah, N.J.: Lawrence Erlbaum Associates.
29. Urbina S (2004) Essentials of Psychological Testing. New Jersey: John Wiley & Sons, Inc.
30. Andrich D (2004) Controversy and the rash model: A characteristic of a scientific revolution? *Medical Care*, 42 (1 suppl.):7-16.
31. Aiken LR (1996) Rating scales and checklists: Evaluating behavior, personality and attitudes. New York, NY: Wiley.
32. Andrich D (2004) Controversy and the rash model: A characteristic of a scientific revolution? *Medical Care*, 42 (1 suppl.):7-16.
33. Hays R, Morales L, Reise S (2000) Item response theory and health outcomes measurement in the 21st century. *Medical Care*, 38 (9), Supplement II, 28-42.
34. Jahangir M, Editor Bangla Kagoj I (2009) Bangla Kagoj, a weekly news paper in Toronto. Telephone discussion, November 27, 2009. Toronto.
35. Haladyna TM (1999) Developing and validating multiple-choice items (2nd ed.). Mahwah, NJ: Lawrence Erlbaum associates.
36. Linn L (1997) Evaluating the validity of assessments: The consequences of use. *Educational Measurement: Issues and Practice* 16:5-8.
37. Osterlind SJ (1998) Constructing test items: multiple-choice, constructed-response, performance, and other formats (2nd ed.) New York: Kluwer Academic Publishers.
38. Wilson M (2005) Constructing Measures: An item Response Modeling approach. Mahwah, NJ: Lawrence Erlbaum associations Publishers.
39. Abed F (1998) Towards Gender Equity: BRAC Center Policy. Dhaka: BRAC Printers.
40. Ahmed S, Hakim M (Eds.) (2004) Attacking poverty with microcredit. Dhaka: The University Press Limited and Palli Karma-Sahayak Foundation.
41. Aujla A (2006) Others in their own land: second generation south asian canadian women racism and the persistence of colonial discourse. In andrea medovarski and brenda cranney (eds.). *Canadian Woman Studies* 20:2.
42. Backer FB (2001) The basics of item response theory (2nd ed.) *Canadian Women Studies: An Introductory Reader*. Toronto: Inanna. 172-84.
43. Retrieved from <http://ericae.net/irt> available from <http://edres.org/irt/backer/>
44. Bennet RE, Ward WC (Eds.) (1993) Construction versus choice: Issues in constructed response, performing testing, and portfolio assessment. Hillsdale, NJ: Erlbaum.
45. Bock RD (1997) A brief history of item response theory. *Educational Measurement: Issues and Practice* 16:21-32.
46. Bryk AS, Raudenbush S (1992) Hierarchical liner models: applications and data analysis methods. Newbury Park, CA: Sage.