ASSESSING VALIDITY AND RELIABILITY OF SOCIAL MEDIA AS AN EMPOWERMENT TOOL FOR A GROUP AT RISK IN MALAYSIA

NORSIAH ABDUL HAMID
MOHD SOBHI ISHAK
NORHAFEZAH YUSOF

UNIVERSITI UTARA MALAYSIA

Abstract
This article discusses a study on empowerment of a group at risk via social media in Malaysia which focuses on five important dimensions namely economy, social and cultural, legal, political, and psychology. The group at risk focused in the study refers to women. The study employed a survey that uses a set of online questionnaire distributed to women who are actively using social media, particularly social networking sites. This study involves a sample of 1,307 respondents in an exploratory study, in which a 5-factor 24-item instrument to measure empowerment comprising of the five hypothesised dimensions were being developed. Results confirm factor structures of the empowerment model and suggest a more parsimonious instrument for each; a 5-factor 15-item scale for social media empowerment, as compared to the result of pilot study conducted. Goodness-of-fit indices for the model are presented. The result shows that the five dimensions are significant to the empowerment model of women in Malaysia. The findings can contribute greatly to a better understanding of the empowerment mechanism behind social media issues pertaining to women.

Keywords: Women, social media, empowerment, measurement model, group at risk.

MENILAI KESAHAN DAN KEBOLEHPERCAYAAN MEDIA SOSIAL SEBAGAI ALAT PEMERKASAAN KUMPULAN BERISIKO DI MALAYSIA

Abstrak
Artikel ini membincangkan kajian mengenai pemerkasaan kumpulan berisiko melalui media sosial di Malaysia yang memberi tumpuan kepada lima dimensi penting iaitu ekonomi, sosial dan budaya, undang-undang, politik, dan psikologi. Kumpulan berisiko yang diberi fokus dalam kajian ini ialah wanita. Kajian ini menggunakan kaedah tinjauan melalui set borang soal selidik yang diedarkan secara dalam talian kepada wanita yang aktif menggunakan media sosial, terutamanya laman rangkaian sosial. Kajian penerokaan ini melibatkan sampel seramai 1,307 responden, di mana instrumen mengandungi lima faktor dengan 24 item untuk mengukur pemerkasaan daripada lima dimensi dihipotesis telah dibangunkan. Dapatan telah mengesahkan struktur faktor bagi model pemerkasaan dan mencadangkan instrumen yang lebih parsimoni untuk setiap satu; skala 5-faktor dengan 15 item untuk pemerkasaan media sosial, berbanding hasil daripada kajian rintis yang dijalankan sebelum ini. Indeks ketepatan padanan bagi model berkenaan juga dibentangkan. Hasil kajian menunjukkan lima dimensi berkenaan adalah

signifikan kepada model pemerkasaan wanita di Malaysia. Hasil kajian boleh memberi sumbangan besar kepada pemahaman yang lebih baik mengenai mekanisme pemerkasaan di sebalik isu-isu media sosial berkaitan wanita.

Kata kunci: Wanita, media sosial, pemerkasaan, model pengukuran, kumpulan berisiko.

Introduction

The rapid growth of social media applications resulted significant increase in the usage among women. Studies support the fact that social media is immensely popular among young people and adults (Boyd, 2007; Lenhart, Madden, Smith, Purcell, Zickuhr, & Rainie, 2011). Interestingly, women's usage of social media keeps on increasing and outnumbering men globally (Hicks, 2010; Lenhart, 2009; McPherson, 2014) and their usage are led by application, especially Facebook, Pinterest, Instagram (Duggan, 2015) and blogging (Jones, Johnson-Yale, Willermeier & Perez, 2009). This positive trend has also given rise to the issues of empowerment and risk of social media towards this group. When women are exposed to social media, they could utilise it into beneficial things, but at the same time, social media could also endangered them. Many women's success stories proved that social media is beneficial if it were used wisely (Hall, 2015), but many cases reported women were the victims of social media fraud (e.g. Astro Awani, 5th Sept 2014).

This research intended to investigate the potential empowerment opportunities of social media perceived by Malaysian women. Women and girls are referred to as 'a group at risk' due to the fact that they are more exposed to online risks and threats as compared to men and boys. This group is chosen for the study as social media give benefits and empowerment opportunities, in terms of entrepreneurship, strengthening relationship and network, career development, and skills improvement (Quizon, 2010; Taubenheim, Long, Smith, Jeffers, Wayman & Temple, 2008). This research will provide dimensions in understanding the issues of social media usage in Malaysia. Furthermore, by understanding the empowerment opportunities and strategies, we can come up with a social media model that is designed in such a way that it can contribute to the Malaysia value-based knowledge society which is targeted to be achieved by the year 2020. The overarching aim of this study is to determine the empowerment dimensions in the context of social media perceived by Malaysian women, and the dimensions proposed include Economy, Politics, Social and Culture, Legal and Psychology.

Women Empowerment

Half of the world's population is female, but according to the United Nations, women still earn no more than one-tenth of the world's income (Communication World, 2010). In Malaysia, particularly, only 53.6% of women contribute to the workforce (TalentCorp, 2015). Even though there is a relatively large body of literature on issues pertaining to women and ICT in Malaysia, studies on women and social media are rather limited. Despite the fact that the topic on empowerment applies to women as well as other disadvantaged or socially excluded groups, it is important to acknowledge that women's empowerment encompasses some unique additional elements (Malhotra, Schuler & Boender, 2002).

First, women are not just one group amongst several disempowered subsets of society (the poor, ethnic minorities, indigenous people, the disabled et cetera), but they are a cross-cutting category of individuals that overlaps with all these other groups. Second, the household and interfamilial relations are a central locus of women's disempowerment in a way that is not true for other disadvantaged groups. Third, women's empowerment requires a systemic transformation in not just any institutions, but fundamentally in those supporting patriarchal structures (Kabeer, 2001; Malhotra, Schuler & Boender, 2002). Empowerment is considered as both a *process* and an *outcome* (Economic Commission for Africa, 2008), which is supported by Akinsanya (2011) who emphasizes that empowerment as flexible and elastic; often perceived as a *process* by which people gain control over their lives; enhancement and creating the opportunity for betterment (*outcome*).

Women empowerment and gender equality have been set as effective ways to reduce poverty, hunger, and disease, and also to stimulate sustainable development (Economic Commission for Africa, 2008). In addition, various research have been conducted on empowerment, focusing on different perspectives, such as psychological empowerment (Hunter, Jason & Keys, 2012), social empowerment (Bishnoi, Mehta, Godata & Sethi, 2012), sexuality (Gill, 2012), restorative justice (Aertsen, Abolívar, De Mesmaecker & Lauwers, 2011), labor education (Akinsanya, 2011), finance (Arora & Meenu, 2011) and tested on different cultures, such as Badran (2010) on Egyptians, Akinsanya (2011) on Africans, Daher (2012) on Lebanese, while Bhattacharya and Banerjee (2012) and Bishnoi, Mehta, Godata and Sethi (2012) focused on Indians. Bhattacharya and Banerjee (2012) have tested the empowerment model with three dimensions – health, knowledge, and autonomy, in which empowerment is viewed as capability-enhancement. They concluded that health and knowledge dimensions are supplementary to the autonomy dimension in determining the empowerment index. Previous findings provide support that access of women to education, technology, healthcare, social support, and economy is inadequate and that is the reason why they "remain largely marginalized, poor and socially excluded" (Bishnoi et. al, 2012) and these have led to broadening the technological gender gap (Daher, 2012).

Social Media and Women Empowerment

Technological empowerment such as ICT ownership model was found to have a positive effect and statistically significant to women empowerment (Badran, 2010). Social media, as part of ICT, have also proven to be an effective tool in empowering women. Many success stories have been highlighted that provide evidence that social media continues to help women gain control over their lives, and enhance the quality of life. Women faced many barriers in using social media, starting from the basic and technological illiteracy, language barrier, family commitment and priority, stereotype of women's role in society and culture, plus low education achievement among women as compared to men.

Studies on empowering women with social media show that the tool can be utilised for communication and self-expression, civic participation, social change, women's rights and economic empowerment (Dubai School of Government Report, 2011). Interestingly, the study also revealed that more men than women alleged that social media can be used for political empowerment of women, while the majority of women use social media as a news source and to connect with family/friends. Moreover, social media can be an approach to magnify women's

voice (Daher, 2012). Stavrositu and Sundar (2012) found that women gained psychological empowerment by blogging, in terms of motivations via sense of agency and sense of community. Their study also revealed that self-actualization is complete when feelings of membership, influence, integration and fulfilment of needs, as well as shared emotional connection, are satisfied. Hence, it is important to examine how women in Malaysia perceived social media as an empowerment tool for them.

Method

This is a cross-sectional-descriptive study. Participants of this research were 1,307 young and adult women selected via purposive sampling and the main criteria for selection of respondents are women who actively use social media in daily lives and can be reached by the researchers via snowballing technique. The questionnaires were distributed via online web survey. The questionnaire consists of six sections including the demographic profile of the respondents, and five dimensions of empowerment, developed by using empowerment model suggested by Malhotra and Schuler (2005). All questionnaires had validity and reliability tested. Structural Equation Modelling (SEM) through AMOS-18 and SPSS-19 software packages were used for data analysis. Fit indices include the Chi-Square statistics divided by the degree of freedom (x^2/df); Root Mean Square Error of Approximation (RMSEA), SRMR, Parsimony Normed Fit Index (PNFI), and Comparative Fit Index (CFI) as suggested by Hair, Black, Babin and Anderson (2010), Hu and Bentler (1999), Kline (2005), Mulaik, James, Van Alstine, Bennet, Lind and Stilwell (1989), and Tabachnik and Fidell (2007). The survey was developed with the help of prior research, literature review, and social media consumer research. The development of the instrument consists of a 5-point Likert-type scale (1=Strongly Disagree to 5=Strongly Agree) and the participants were asked to rate the 24 items relating to the five dimensions, i.e. Economy, Social and Culture, Legal, Politics, and Psychology.

Results

Demographic Profile

Participants were 1,307 females; age ranged between 19 and 54 years old with mean age=24. 75 (SD=4. 77). The majority of the respondents is single (82.6%), Malays (76.5%) and many of them have obtained at least a Bachelor degree or above (66.2%). In terms of employability, more than half of the respondents are students (52.6%), 27.5% are support staff, 10.2% are professional staff, 8.6% are unemployed, while 1.1% are housewives.

Table 1: Demographic Profile of Respondents (N=1, 307)

Demography	Frequency	%
Age		
19 – 28	1,114	85.2
29 – 38	154	11.8
39 – 48	34	2.6

49 – 54	5	0.4
Marital status		
Single	1,080	82.6
Married	213	16.3
Others	14	1.1
Race		
Malay	1,000	76.5
Chinese	157	12
Indian	51	3.9
Sabah/Sarawak	93	7.1
Others	6	0.5
Academic Qualification		
Bachelor degree and above	865	66.2
Diploma and Certificate	156	12
Higher School Certificate and below	286	21.9
Employment		
Professional staff	133	10.2
Support staff	360	27.5
Housewife	14	1.1
Student	688	52.6
Unemployed	112	8.6

Examining Assumption of SEM

Table 2 shows the five dimensions with the detailed 24 items being tested. These items were derived from Malhotra and Schuler (2005).

Table 2: Original Items Proposed for Social Media Empowerment Model of Women

Dimension	Item	Statement (In terms of Economy / Social & Cultural / Legal / Political / Psychology, social media enables me to...)
ECONOMY	ECON1	Increase family income
	ECON2	'Make money'/'increase wealth'.
	ECON3	Know what my family has spent
	ECON4	Know how my family has spent
	ECON5	Control expenses of my family.
SOCIAL AND CULTURE	SOC1	Have freedom in connecting with others.
	SOC2	Not discriminated from using the technology.
	SOC3	Use it for something that I like.
	SOC4	Freedom to quest for new knowledge.
	SOC5	Freedom to make a decision.
	SOC6	Freedom in giving an opinion.
	SOC7	Freedom to build relationship with anyone.
	SOC8	Have the right to determine life.
	SOC9	Refrain from violence of others.
LEGAL	LEGAL1	Know my rights in legal.

	LEGAL2	Know ways to claim for my rights.
	LEGAL3	Gain support from my family in claiming my rights.
POLITICS	POL1	Know the Member of Parliament and State Member in my area.
	POL2	Know how to channel my problem to the Member of Parliament and State Member in my area.
	POL3	Gain support from my family to get involved in politics.
	POL4	Know my rights as a voter.
PSYCHOLOGY	PSY1	Feel more confident.
	PSY2	Have high resilience.
	PSY3	Have a stable mind.

Examining Goodness of Fit (GOF) Indices

In terms of overall fit, Table 3 reveals the following fit statistics: x^2=402. 5, df=85, x^2/df=4. 7, RMSEA=0. 05, SRMR=0.047, and CFI=0. 981. The relative fit indicators exceed 0.90 and the absolute fit indicators suggest that the residuals are small and tightly distributed. Consistent with this, the parsimony fit indicator, PNFI, exceeds 0.6, indicating that the model has adequate over-identifying restrictions for parsimony. Based on these statistics, it can be concluded that the hypothesised model provides an adequate fit to the data.

Table 3: Goodness-of-Fit Indices

Fit Indices	Cut-off Value	Actual Value
Chi-square (x^2)		
Chi-square (p-value)		402.495
Degrees of freedom (df)		85
Absolute Fit Indices		
Relative Chi-square, x^2/df (CMIN/DF)	5:1	4.735:1
Root Mean Square Error of Approximation (RMSEA)	< 0.08	0.053
Standardized Root Mean Square Residual (SRMR)	< 0.08	0.047
Incremental Fit Indices (IFI)		
Comparative Fit Index (CFI)	CFI > 0.90	0.981
Parsimony Fit Indices (PFI)		
Parsimony Normed Fit Index (PNFI)	PNFI > 0.60	0.79

Evaluating Construct Validity

Construct validity was evaluated to ensure that set of measurement items represents the theoretical latent construct these variables were designed to measure. Construct validity consisting of convergent and discriminant validity.

a. *Convergent and Discriminant Validity*

Convergent validity is examined through factor loadings, Critical Ratio (RC) and Average Variance Extracted (AVE). As shown in Table 4, all the factor loadings exceed 0.7 as suggested by Hair et al. (2010). Only one item (SOC5) shows factor loading less than 0.7, but the researcher decided to retain it for model fit test.

Table 4: Factor Loadings for Dimensions of Empowerment Model

Dimension	Items	Factor Loading
Psychology	PSY1	.92
	PSY2	.96
	PSY3	.91
Politics	POL1	.92
	POL2	.88
	POL4	.75
Social and Culture	SOC1	.75
	SOC2	.77
	SOC3	.72
	SOC5	.60
Economy	ECON3	.95
	ECON4	.99
Legal	LEGAL1	.95
	LEGAL2	.97
	LEGAL3	.85

Discriminant validity tested the degree to which the constructs differ from each other (Afari, 2013). The discriminant validity was assessed by applying two analytical procedures, (i) the square root of average variance extracted (AVE) for each construct is larger than the inter-construct correlation (Barclay, Higgins & Thompson, 1995; Fornell & Larcker, 1981; Hair et al., 2010), and (ii) the loading of an item within a construct is greater than its loading in any other construct in the model (Gefen, Straub & Boudreau, 2000). The correlation pattern indicated that every item had a stronger correlation with its construct, confirming the measurements reliability. The average variance extracted (AVE) values for the five constructs were above .50, ranged from 0.507 to 0.936. For the composite reliability (CR) to be adequate, a value of 0.70 or higher was recommended (Nunnally & Bernstein, 1994). The final criterion to satisfy convergent validity was the measure of the AVE. AVE is a measure that indicates the amount of variance in the item that is explained by the construct. The results of the statistical analysis in Table 5 show that all of the AVE values were above the suggested value of 0.5. Likewise, construct reliability (CR) values ranged from 0.803 to 0.967 exceeded the 0.7 thresholds. Taken together, the evidence supports the convergent validity of this study measurement model (Hair et al., 2010). The results of discriminant validity are also shown in Table 5.

Table 5: Reliability, AVE and Discriminant Validity of Empowerment Model

DIMENSION	CR (>0.70)	AVE (>0.50)	ECO	LGL	PSY	POL	SOC
Economy (ECO)	0.967	0.936	**0.968**				
Legal (LGL)	0.948	0.858	0.329	**0.926**			
Psychology (PSY)	0.948	0.860	0.288	0.583	**0.927**		

Politics (POL)	0.888	0.726	0.321	0.636	0.513	**0.852**	
Social & Culture (SOC)	0.803	0.507	0.156	0.390	0.412	0.317	**0.712**

Note: the bold elements in the main diagonal are the square roots of average variance extracted

b. Nomological Validity

Based on item-factor loadings, three items were dropped from Economy, five items from Social and Culture, and one item from Politics which have loadings less than 0.5 (Hair, Ringle, & Sarstedt, 2011; Barclay et al. 1995; Chin 1998). Results indicated that the overall measurement model of empowerment achieved a good-fitting model. The re-specification model of social media empowerment finalised a 15-item measurement model from the five constructs as suggested by Malhotra and Schuler (2005). Finding of this study is an improvement from the pilot study conducted among 88 respondents (Hamid, Ishak & Yusof, 2015) in which the measurement model shows the model fit based on 5-factor, 14-item scale for social media empowerment, while the current research improves the model fit based on 5-factor 15 items, and also the improvement on the goodness-of-fit indices.
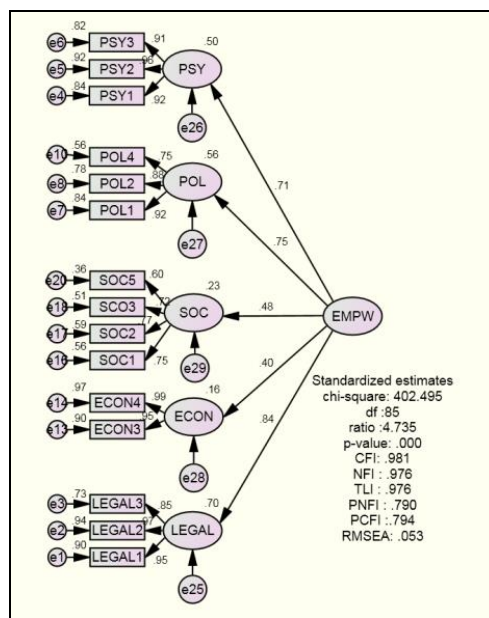

Figure 1: Social Media Empowerment Model

Discussion

The findings of this study contribute to the debate on the measurement of empowerment among women. Thus, it is promising and support previous research and theory concerning empowerment (Rappaport, 1984; Zimmerman, 1995; 2000) and women empowerment (Malhotra & Schuler, 2005). This study also supports previous findings on psychological empowerment (Stavrositu & Sundar, 2012), in which women perceived social media as tools to achieve a better outcome such as feel more confident, have high resilience, and a stable mind. All the three items measured under Psychology have high factor loading between 0.91-0.96. When asked about how

social media could empower them in politics, result shows that the respondents could gain knowledge about the political leaders in their area, including MP and State Member, and knowledge about their rights as voters. However, since the item POL3 was deleted due to low factor loading, it shows that respondents do not perceive social media as beneficial in helping them to gain support from family to get involved in politics. This is more likely to be true as women are not as active in online politics as compared to men (Carlisle & Patton, 2013).

In terms of social and culture, this study found that women perceived themselves as empowered by social media by having freedom in connecting with others, not discriminated from using the technology, they can use it for something that they like, and having freedom in making decision. However, this study emphasised that women seem to have reserved some spaces for their own social and cultural needs, since five items were deleted due to low factor loadings. The five items being deleted were related to freedom to quest for new knowledge, freedom in giving opinion, freedom to build relationship with anyone, have the right to determine life, and refrain from violence of others. This is paralleled with Duggan (2015) who found that women are less likely than men to participate online i.e. discussion forums. In addition, social media can be utilised for income and wealth generation, thus improve the economic status of women. The findings of this study support Suresh (2011) that technology is essential in empowering women in terms of their economy. Many women's success stories using social media as tools for income and wealth generation were chronicled in books (e.g: Hall, 2015) and websites (Female Entrepreneur Association International). In terms of legal dimension, the movement to spread women's awareness on political and legal activism including women's rights, tackling violence against women and public accountability towards gender equality through social media tools have also been highlighted by Wikigender online discussion (Loiseau & Nowacka, 2015, p.2). All the three items tested under Legal dimension in this study have high factor loadings between 0.85 and 0.97. This indicates that women are aware of their rights, know ways to claim for their rights, and gain support from their family in claiming their rights.

Limitations and Future Research

First, the empowerment model tested is limited to only five dimensions, comprising 24 items. Second, the respondents involved in this study were women who were contacted via email and social networking sites, Facebook to be specific, with the assumption that they are active user of other social media apps. Thus, other women who also actively users of social media that cannot be reached by researchers were not included. Therefore, future research could expand the sampling pool according to different states in Malaysia and socio-economic status, various employment positions, and academic qualifications. Future research can also add other dimensions such as motivation and technological literacy, and enhance the measurement items of the existing dimensions.

Conclusion

This paper reported on a confirmatory assessment and refinement of the empowerment measures based on five dimensions of empowerment suggested by Malhotra and Schuler (2005). Results of this study provide evidence that the dimensions of Economy, Social and Culture, Psychology, Politics, and Legal are deemed important in empowering women through the use of social media.

Women who use social media need to understand the empowerment opportunities and utilise it for the betterment. The model draws on the strengths of five key areas and provides an insight into the perception of women in terms of social media empowerment. Hence, it is important to educate women on the issues related to social needs and problems in using social media in a much more productive and efficient way as it will not only benefits them as individual, but also provide support for their families and communities at large. When women understand their role and responsibilities, they will surely help boost up the living standard of themselves, their families and society.

For the overall development of a country, empowered, educated, and enlightened women are very much essential (Ahmad, 2011). One of the tools to empower women is through social media. Neglecting to give women access to the social media tools not only deprives them and their income but also reduces the skill levels of the nation, limits productivity, and bars a country from being competitive in the global market (ITU, 2003). Hence, women must be given an equal chance of accessing and using social media. This article presented a study on the involvement of a group at risk, particularly women in social media setting. Women increasingly involved in social media to fulfil their various needs. This involvement can be associated with the empowerment opportunity for this group by using social media. Researchers have also devoted significant attention to the use and impact of social media for this at-risk group.

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ABOUT THE AUTHORS

Norsiah Abdul Hamid is a Senior Lecturer at the School of Multimedia Technology and Communication, Universiti Utara Malaysia. She holds a PhD in Information Science from Universiti Kebangsaan Malaysia. Her areas of interest include psychology of media, women and gender, and knowledge society.

Mohd Sobhi Ishak is a Senior Lecturer at the School of Multimedia Technology and Communication, Universiti Utara Malaysia. He holds a PhD in Mass Communication from Universiti Putra Malaysia. His areas of interest include media, religious, politics, and statistical techniques.

Norhafezah Yusof is an Associate Professor at the School of Multimedia Technology and Communication, Universiti Utara Malaysia. She read her PhD in Communication from Nottingham Trent University, United Kingdom. Her areas of interest include space and culture, change management, women, and religion and culture

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