HUMAN AND SOCIAL LIVELIHOOD TO INCREASE RESILIENCE AMONG MIGRANT WOMEN - CASE STUDY OF MANAGING HUMAN DISASTER

Abstract

South Africa is a country that is perceived by many as a progressive democratic country with one of the highest Human Development Indexes (HDI) according to the United Nations Development Program (UNDP). The influx of international migrants including women in South Africa has continued unabated due to socio-economic and geo-political situation in Sub-Saharan Africa. This paper discusses how the migrant women utilised the human and social livelihood capitals to cope and adapt in South Africa. A case study of 332 randomly sampled migrant women from 23 Sub Saharan Africa countries resident in six metropolitan cities of South Africa explores how it was possible for migrant women to cope and adapt. Multi variant analysis of the human and social livelihood capital factors identified was done and rated after the migrant women ranked them. The results indicated that the human and social capitals factors were acquired in their home countries, developed and nurtured in the host country as coping and adaptation mechanisms.

Key words: international migration, women, human capital, social capital, coping, adaption

MIGRÁNS N K KÖRÉBEN VIZAZSGÁLT EMBERI ÉS TÁRSADALMI VISELKEDÉSFORMÁK – ESETTANULMÁNY CIVILIZÁCIÓS KATASZTRÓFÁK KEZELÉSÉNEK TÉMÁJÁBAN

Absztakt

Bevezetés: a Dél-afrikai Köztársaság sokak szerint egy élenjáró demokratikus ország, melyet mi sem bizonyít jobban, mint hogy az ENSZ szerint itt az egyik legmagasabb a Nemzetek Fejlesztési Programjának indexe (HDI). A nemzetközi migránsok beáramlása jelenleg egy állandó, egyenl re véget nem ér folyamatnak t nik itt is, köszönhet en a szubszaharai afrikai országok bizonytalan gazdasági, társadalmi és politikai helyzetének. A cikk a Délafrikai Köztársaságba bevándorló n k helyzetének vizsgálatán keresztül mutatja be a probléma lényegét. Ennek során bemutatásra kerül, hogy ezek a n k hogyan használják ki az ország nyújtotta emberi és szociális lehet ségeket, azzal a céllal, hogy alkalmazkodhassanak az ottani viszonyokhoz. Módszertan: A cikkben 23 különböz szubszaharai országból 332 véletlenszer en kiválasztott migráns n került megkérdezésre hat nagyvárosban, azzal a céllal hogy feltárják beilleszkedésük és alkalmazkodóképességük folyamatát. A szerz k a humán és társadalmi tényez k többváltozós elemzésének segítségével végezték és értékelték a migráns n k helyzetét. Eredmények: A cikk eredményeként megfogalmazhatók azok a társadalmi jellemz k, melyeket a bevándorlók még a saját országukban szereztek meg, és azok a szembeszegülési és alkalmazkodási mechanizmusok, melyet már a fogadó országban tanúsítanak.

Kulcsszavak: nemzetközi bevándorló, n k, humán t ke, társadalmi t ke, adaptáció

INTRDUCTION

In spite of being one of the most developed countries in Africa, South Africa has many international challenges to solve them. [1] The region of Sub Saharan Africa (SSA) is depicted as a region of people who are highly mobile. [2] Initially, it was mostly unskilled workers who migrated [3] but notably then since the 1980s Sub-Saharan African skilled personnel and professionals, and even women joined the flow of migration internationally [4] According to Ratha and Shaw (2007) most studies on international migration usually concentrated on South North flows, disregarding the fact there is more South South flows of migrants. A total of 14.5 million international migrants were Africans and of these 10 million of them moved within the Sub Saharan African region including South Africa which was the focus country of this study. Former colonial links also facilitated Sub-Saharan African international migration making it easier for the movement and settling of people especially from the Southern African Development Community. However, with globalisation people were extending their migration destinations as the world has become increasingly smaller and easily accessible. [5] Hence as many as 23 Sub Saharan African countries were represented in the study. South Africa had been well-known as a preferred destination of the majority of the African migrants because it was "perceived" as a thriving and vibrant economy [6] This was reiterated by [7] who mentioned that international migration in Sub Saharan Africa is vibrant and not easy to understand as most of the migrants are heading to South Africa that is considered or perceived the most developed economy in Africa.

Migration is undertaken by the people who have raised aspirations, have acquired some financial possessions and valuable information, and are not willing to be categorised as a deprived population anymore. [8] Migrants generally are characterised by various socio economic characteristics like their education levels, marital statuses, and age among many others. Therefore, some people who migrate have some form of survival mechanisms, that is, inherent livelihood capacities or capitals like the human and social among others that they may make use of to cope and later to adapt in host countries. These capitals, coupled with the socio-economic characteristics, information and improved technology, results in the expansion of people's choices and can enable them to migrate globally. [9] It is against this background that the study tried to explore how the African migrant women were making use

of the human and social livelihood capital factors to cope and adapt in South Africa. The various demographic and socio-economic characteristics, survival skills and options, the two livelihood capitals namely human and social and other means that facilitate their lives including their well–being in South Africa are evaluated.

MATERIALS AND METHODES

The semi-structured questionnaire was used to collect the quantitative data. Overall evaluation of the combined human and social livelihood capitals was carried out and a total of 100% was arrived at. This makes an assumption that 100% is the perfect position whereby the livelihood capitals are optimally available to the participants. The migrant women are affected differently by their access and possession of human and social livelihood capitals. These livelihood capitals were evaluated from South Africa's prevailing socio-economic situation whereby the migrant women and all other migrants are vulnerable to some extent, possess some capacities, and are limited to some degree by policies; institutional arrangements and processes and also they employ certain livelihood strategies in order to achieve livelihood outcomes in South Africa [10]

The population of the study was all the African migrant women in South Africa who arrive after 1994, had a livelihood and were from Sub Saharan Africa. The multiple stage sampling technique was then employed. Firstly four of the nine provinces of South Africa were selected. These were Free State, Gauteng, KZN and Western Cape provinces. Gauteng, KZN and Western Cape provinces were selected because they were the economic hubs of the country. However Free State province was selected because of its proximity and availability of the respondents to the researcher.

The second stage was the ballot selection of the metropolitan cities. The 6 metropolitan cities were randomly selected. These were Bloemfontein from the Free State, Johannesburg, Pretoria, Ekurhuleni from Gauteng, Durban from Kwa Zulu Natal (KZN) and Cape Town from the Western Cape Province. A total of 332 respondents successfully completed the questionnaires, a sample that was purposively selected. Eighty two respondents were drawn

from Bloemfontein, 81 from Cape Town, 78 from Durban, 24 from Ekurhuleni, 36 from Johannesburg and 31 from Pretoria

All the data collection were done by the researcher and two research assistants who were trained and familiarised with the survey process. Face-to-face interactions with all the participants was done. The survey entailed door-to-door shop visits for those that were in their businesses, at their jobs and also house-to-house visits at the weekends for some of the participants. The survey was conducted both at the weekends and during the week. The data was collected between March and May 2016. The pre-determined livelihood capital factors from the two livelihood capitals were put forward for the participants to evaluate in a mixed method questionnaire. The human livelihood capital factors identified were education, health, knowledge and skills and capacity to work. The social livelihood capital factors identified were networks and connections; relations of trust and mutual support; informal and formal networks and finally collective representation This rating approach was used to rate the human and social capitals to identify the most prominent indicator that influenced African women migrants' coping and adaptation.

RESULTS AND DISCUSSION

Variable	Category	Total	Percent
Age	18-29	111	33.4
	30-39	157	47.3
	40-49	48	14.5
	50-59	12	3.6
	60+	3	.9
	Other	1	.3
Marital status	Single	105	31.6
	Staying with partner	2	0.6
	Engaged	1	0.3
	Married	173	52.1
	Widowed	21	6.3

Below is the synthesis of the demographic characteristics of the respondents.

	Divorced	9	2.7
	Separated	8	2.4
	Never married	11	3.3
	Other	2	3.3
Level of education	Lower Primary (Grade 3/	2	.6
	Std 1)		
	Upper Primary (Grade 4-	21	6.3
	7/Std 2-6)		
	Secondary	193	58.1
	Certificate	25	7.5
	Diploma	36	10.8
	Technicon qualification	5	1.5
	University degree	18	5.4
	Post graduate qualification	31	9.3
	No education	1	.3
Position in the	Head /sole breadwinner	122	36.8
household	Wife	165	49.7
	Mother	12	3.6
	Relative	31	9.3
	Other	2	.6
Proficiency in	Yes	311	93.7
English	No	21	6.3
0			
Occupation	Senior officer and mangers	19	5.7
_	Senior officer and mangers Professionals	19 13	5.7 3.9
_	· ·		
_	Professionals	13	3.9
_	Professionals Clerks, service workers	13 24	3.9 7.2
_	Professionals Clerks, service workers Service workers, shop and	13 24	3.9 7.2
_	Professionals Clerks, service workers Service workers, shop and market sales	13 24 33	3.9 7.2 9.9
_	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers	13 24 33 45	3.9 7.2 9.9 13.6
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations	13 24 33 45 198	3.9 7.2 9.9 13.6 59.6
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations High skills permit	13 24 33 45 198 4	3.9 7.2 9.9 13.6 59.6 1.2
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations High skills permit Work permit	13 24 33 45 198 4 1	3.9 7.2 9.9 13.6 59.6 1.2 .3
Occupation	ProfessionalsClerks, service workersService workers, shop andmarket salesCraft related trade workersElementary occupationsHigh skills permitWork permitSpousal permit	13 24 33 45 198 4 1 9	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations High skills permit Work permit Spousal permit Jumped boarder	13 24 33 45 198 4 1 9 30	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7 9
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations High skills permit Work permit Spousal permit Jumped boarder Fake passport	13 24 33 45 198 4 1 9 30 1	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7 9 .3
Occupation	Professionals Clerks, service workers Service workers, shop and market sales Craft related trade workers Elementary occupations High skills permit Work permit Spousal permit Jumped boarder Fake passport Birth rite	13 24 33 45 198 4 1 9 30 1 1 1	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7 9 .3 .3 .3
Occupation	ProfessionalsClerks, service workersService workers, shop andmarket salesCraft related trade workersElementary occupationsHigh skills permitWork permitSpousal permitJumped boarderFake passportBirth riteFamily unification	13 24 33 45 198 4 1 9 30 1 1 1 5	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7 9 .3 .3 .3 1.5
Occupation	ProfessionalsClerks, service workersService workers, shop andmarket salesCraft related trade workersElementary occupationsHigh skills permitWork permitSpousal permitJumped boarderFake passportBirth riteFamily unificationStudy permit	13 24 33 45 198 4 1 9 30 1 1 1 5 22	3.9 7.2 9.9 13.6 59.6 1.2 .3 2.7 9 .3 .3 1.5 6.6

Visitors visa	194	58
Emergency travel document	1	.3
Other	16	4.8

Table 1. Respondents' demographic informationSource: Survey results (2016)

Human capital factors of coping and adaptation

The participants were asked to score each of the factors that contributed to their coping and adaptation in South Africa.

Education livelihood factor

One hundred and seventy five (52.4%) of the respondents ranked education as very high which meant that it contributed to their coping and adaptation in South Africa. Forty six (16.6%) ranked education high. A total of 55 (16.6%) respondents ranked education as moderate. That translated to 276 respondents being positive with the education as a coping and adaptation mechanism in South Africa. Earlier on 308 respondents indicated that they had secondary education, certificates, diplomas, technicon qualifications degrees and post graduate degrees as indicated in Table1 above. That showed that literacy levels were high among the migrant women. Nine percent (9%) who ranked education as very low and verbally expressed their sentiments that they were doing jobs that do not need an education. A woman who was selling vegetables in Parrow, Cape Town stated that as a qualified educator she had no choice but sold vegetables since she could not get a job commensurate with her qualification as was the case in the Canadian labor environment where migrant women had to lower their qualifications and accept lower jobs in order to earn a livelihood. [11] Migrant women deskilled themselves in order to survive in South Africa. That had to be looked at seriously since South Africa is grappling with skills shortages and this could be an opportunity to capitalize on the skills of the women migrants already in the country.

Health as a livelihood factor

Two hundred and seventy seven (83.1%) of the respondents indicated that health was very important for one to cope and adapt in South Africa. They indicated that they were healthy and those who had once fallen sick were attended to at various public and private health institutions in South Africa. It was noted from the informal interviews done during the survey that the women in Cape Town, Durban and Bloemfontein expressed their satisfaction with how the public health systems and personnel treated them when they sought medical attention. They had praises for the public health systems in those metropolitan cities. However in Gauteng province, particularly in Johannesburg, Pretoria and Ekurhuleni the respondents expressed dissatisfaction with the treatment they received from public health facilities. One woman from Zimbabwe who had breast cancer and was successfully operated at Edington Hospital in Durban was so happy and attributed to her survival to the health personnel at that institution. In Johannesburg 3 women from Zimbabwe, Nigeria and Mozambique expressed how they were denied access to food, medication and bedding at some of the hospitals in Gauteng. An Ethiopian woman also gave her account that "The nurse from South Africa who knows very well how some wealthy Ethiopians live, how much money they have and the luxury cars they drive. This nurse is struggling and so the nurse takes advantage of the good policy of South African health facility sector and are therefore reluctant to attend to them and take their time to afford them treatment." Another Zimbabwean woman related how the nursing assistants denied foreigners food and went to the extent of returning the plateful of food back to the kitchen because ".... lina makwerekwere liyahlupha, liyasiminya ... " (... you foreigners are problematic, you are congesting our spaces). Overall the majority of the migrant women were happy with their health and provision of health in the country. South Africa could be an attractive destination for skilled workforce because of the progressive public health institutions and therefore the policies on access to public health care to all who leave in South Africa need to be fully implemented.

Knowledge and skills and capacity to work as livelihood factors

Knowledge and skills were considered to be very important for survival by migrant women in South Africa. Migrant women who entered on study permits managed to get an education and others managed to upgrade and get higher qualifications thereby increasing their human capital value. That enabled them to increase their bargaining power in the work market, got better remuneration and encountered better working conditions. [12] The majority of the respondents (76.8%) indicated that knowledge and skills were very important for survival. Migrant women surveyed were either employed, were entrepreneurs or were supported by family or friends. They utilized their skills and knowledge to earn a living. Those migrant women used their skills to engage in self-employment, menial jobs like housekeeping and sales assistants. Those who worked in salons used their talents and skills they learnt in their home countries to earn money. Some women expressed their joy in the fact that the house keeping jobs they were doing in South Africa were not too difficult as they made use of machinery like hoovers, washing machines and food processors unlike in their home countries. The capacity to work is very high and high at 82.8% and 31 % respectively among migrant women. Of the four factors identified under human capital factors health ranked highest because of the perceptions as well as the experiences of the migrant women that the South African health system is one of the best in the continent. South African health system is actually ranked 142 out of 191 countries in the world. [13] Capacity to work was ranked second, followed by knowledge and skills and finally education Figure 6.4 indicates the scores of the human capital and there was a fair balance of the factors which indicated that all the factors enhanced the coping and adaptation of migrant women in South Africa.

It is important for the government of South Africa to put more emphasis on developing its human capital base. By growing to human capital base the government could be assured of economic development that will lead to job creation.

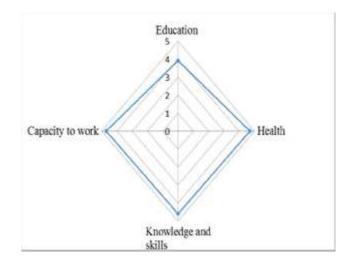


Figure 1. Human capital factors Source:Survey results (2016) 143

Social capital

Social factors that were identified as assisting migrant women survive in the host country were networks and connections; relations of trust and mutual support; informal and formal networks and finally collective representation.

Networks and connections as livelihood factors

A total of 52.1% (173) of the respondent indicated that they considered networks very high as a survival mechanism. Twenty six (7.8%) considered networks and connections as high. Forty seven (14.2 %) considered networks and connections as moderate. Twenty seven (8.1%) of the respondents ranked networks and connections as low and finally 59 (17.8 %) respondents ranked networks and connections very low.

Relations of trust and mutual support as livelihood factors

Relations of trust and mutual support that the migrant women gained from their relations in South Africa also assisted them to cope and adapt. A total of 192 respondents rated the relations based on trust and mutual support high and very high at 10.5% and 47.3% respectively. The migrant women expressed that networks such as church, family, friends, ethnic groups, political connections colleagues and neighbours were necessary in their lives and had been instrumental in their survival in South Africa. For instance family support and spousal support assisted migrant women to cope on arrival in South Africa and those relationships also made the women acculturate better in the new environment. This was in agreement with [14] who stated that the locals also had developed relations with foreign women such as being employed to work for them. A number of salon owners indicated that they employed locals as well and they were working well together. Good rapport had been developed among migrants from various countries and locals and that made coping and adaptation easier. There were some migrant women in Durban however who expressed that they did not trust anyone and also felt alienated in South Africa. Those same migrant women even expressed that they would be glad if they got means of returning back to their home countries. Those women had bad experiences of xenophobia attacks, had been denied employment because of being a foreigner or had "... their husbands snatched by local women."

Formal and informal groups as livelihood capital

Formal and informal groups were identified as very low in terms of coping and adaptation in South Africa. In the work place formal groups were established and in the communities informal groups were formed and both formal (NGOs and faith based organizations and informal groups (*Stokvels* and burial societies) were necessary for the coping and adaptation of migrant women in South Africa. A total of 113 respondents had very low rating for formal and informal groups as coping and adaptation mechanisms in South Africa. That related well to trust and mutual support issues as a lot of women expressed that it was difficulty to rely on others to earn a livelihood. On the other end 99 respondents rated those formal and informal groups very high.

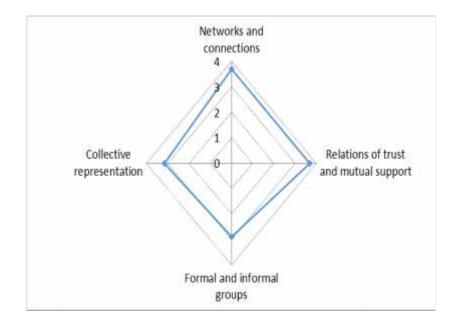
Collective representation

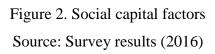
The number of the respondents who rated collective representation as high and very high are 31 and 109 respectively. The migrant women indicated that they used their home country connections like the Zimbabwe Association in South Africa, Cameroonians in South Africa to represent them when they are not fairly treated in South Africa. Some indicated that they utilized religious organizations like Muslim organizations to represent their interests in South Africa. Collective representation as a social capital was useful to the coping and adaptation in a host country.

	Very low	Low	Moderate	High	Very high	Total	Mean score	Factor
								ranking
	Social capital							1
Networks and	59 (17.8)	27 (8.1)	47 (14.2)	26 (7.8)	173 (52.1)	332(100)	3.68	2
connections								
Relations of	41 (12.3)	35 (10.5)	64 (19.3)	35 (10.5)	157 (47.3)	332(100)	3.70	1
trust and								
mutual								
support								
Formal and	113 (34)	37 (11.1)	52 (15.7)	31 (9.3)	99 (29.8)	332(100)	2.90	4
informal								
groups								
Collective	87 (26.2)	24 (7.2)	81 (24.4)	31 (9.3)	109 (32.8)	332(100)	3.15	3
representation								

Table 2. Ratings of the social livelihood capital factors Note: Values in brackets are percentages Source: Survey results (2016).

Figure 2 shows the overall rating of the social capital factors. The highest ranked factor was relations of trust and mutual support, followed by networks and connections, then collective representation and lastly formal and informal groups. A study conducted by [15] concurs with this finding that Muslim women in the USA coped and adapted better in the presence of a family member in the host community together with the support they got from their spouses and flexible gender roles. The all-inclusive South African society is commended for making the coping and adaptation of migrant women better in South Africa.





CONCLUSIONS AND RECOMMENDATIONS

The human capital factors such as health, education, knowledge and skills and capacity to work have positive impacts on economic growth of host countries South Africa being such country to benefit from this. Companies in South Africa could utilize the migrant knowledge and skills in order for them to be productive rather embark on training locals for such jobs. Through their innovation and skills migrant women set up their own businesses that could absorb South Africans, train them, increase productivity and help reduce unemployment levels in the country. A healthy and knowledgeable human capital could be beneficial to South Africa. Human capital can be converted into economic capital as migrants will be contributing to the country's gross domestic product through various taxes. Self-employed migrant women not only come into South Africa with a high level of skills and knowledge but they also provide the much needed capital bring capital investment Dayton- Johnson. Hence the ratings of the capital factors ranged from 1st (health), 2nd (capacity to work), 3rd (knowledge and skills), and 4th (education). Besides these ratings it is very important to make a research in connection with the practice and the different rescue methods. [16]

In the social capital sphere the factors such as relations of mutual trust and support proved beneficial for migrant women in South Africa as the migrant women managed to cope and survive with limited or absent wider family support they enjoyed in their countries of origin. Migrant women derived better support and trust from their fellow country women and men as they have similar social backgrounds from their home countries. Their multiple connections ranging from family, friends, relatives, church friends and fellow compatriots offered them support to cope and adapt better in South Africa. The migrant women expressed that the collective representation for them was not that helpful for them as they encountered challenges and they had to tackle them separately. Hence the multi-variant ratings of the social capital factors were 1st (relations of trust and mutual support), 2nd (networks and connections), 3rd (collective representation) and 4th (formal and informal groupings.

The multi-attribute contingent ratings of the livelihood capital factors that the migrant women applied in South Africa made them cope and adapt in the difficulty South African environment. The livelihood capitals and the capital factors are some of the mechanisms for coping and adaptation in South Africa. In order of the value of coping and adaptation mechanisms, the human (knowledge and skills; capacity to work; health and education) and social (relations of trust and mutual support; networks and connections; collective representation and formal and informal groups factors respectively are used by the migrant women in South Africa.

REFERENCES

- Muyambo F, Jordaan A, Restas A: The importance of civil unrest in emergencies in developing countires; *Védelem Tudomány*, 1 4 (2016), pp. 297-316.
- [2] International Organisation of Migration, 2005. World Migration Report; Costs and benefits of migration 3. Geneva, Switzerland. 2005.
- [3] Taeuber, I. B: Some Demographic aspects of the changing role of women; *The Annals of the American Academy of Political and Social Science* 251 1 (1947), pp. 24-34.
- [4] Adepoju, A. Creating a borderless West Africa: constraints and prospects for intraregional migration. Migration without borders: Essays on the free movement of people. New York/Oxford: Berghahn Books for UNESCO. 2007.
- [5] Rodrigue, J.P., Comtois, C. and Slack, B.: The geography of transport systems;
 Department of Global Studies and Geography, Hofstra University, New York, USA.
 2013.
- [6] Campbell, E. K: Reflections on illegal immigration in Botswana and South Africa; Available online on 2007. https://tspace.library.utoronto.ca/bitstream/1807/49202/1/ep06010.pdf [Accessed on 23 July 2015]
- [7] Adepoju, A: Recent trends in international migration in and from Africa. Human Resources Development Centre Abuja, Nigeria. 2006.

- [8] Hatton, T. and Williamson, J.: Demographic and economic pressure on emigration out of Africa. *Scandinavian Journal of Economics* 105 (2003), 465–486.
- [9] Bertucci, G., Alberti, A: Globalization and the Role of the State: Challenges and Perspectives. Virginia, Kumarian Press. USA. 2003.
- [10] DFID, The Sustainable Livelihood Framework. London: Department of International Development, London, UK. 1999.
- [11] Galabuzi, G.E.:Canada's economic apartheid: The social exclusion of racialized groups in the new century. Canadian Scholar's Press, Toronto, Canada. 2006.
- [12] Dustmann, C.:Language proficiency and labour market performance of immigrants in the UK; *Economic Journal* 113 489 (2003), pp. 695-717.
- [13] WHO: World Health Report 2000. Geneva, Switzerland. 2000.
- [14] Ibañez, G.E., Dillon, F., Sanchez, M., de la Rosa, M., Tan, L. and Villar, M.E., Changes in Family Cohesion and Acculturative Stress among Recent Latino Immigrants; *Journal of ethnic and cultural diversity in social work* 24 3 (2015), pp. 219-234.
- [15] Abuzahra, K. G: Understanding resilience in Muslim-American immigrant women: An examination of protective processes. Unpublished doctoral dissertation, Alliant International University, San Diego. USA. 2004.
- [16] Sáfár B., Muhoray Á: The Practice of International Search and Rescue in Haiti;
 ACADEMIC AND APPLIED RESEARCH IN MILITARY SCIENCE, 12 1 (2013),
 pp. 67-72.

Alice Ncube

Disaster Management Training and Education Centre for Africa Faculty of Natural and Agricultural Sciences University of the Free State, South Africa Email: <u>ncubea@ufs.ac.za</u> ORCID: 0000-0001-7440-5308

Andries Jordaan

Director, Disaster Management Training and Education Centre for Africa Faculty of Natural and Agricultural Sciences University of the Free State, South Africa Email: jordaana@ufs.ac.za ORCID: 0000-0002-5169-7851

Ágoston Restás

Head of Department, Department of Fire Protection and Rescue Control, Institute of Disaster Management, National University of Public Service, Budapest, Hungary, Email: <u>restas.agoston@uni-nke.hu</u> ORCID: 0000-0003-4886-0117

Yonus Bahta

Department of Agricultural Economics Faculty of Natural and Agricultural Sciences University of the Free State, South Africa Email: <u>BahtaY@ufs.ac.za</u> ORCID: 0000-0002-3782-5597

A kézirat benyújtása: 2017.04.28. A kézirat elfogadása: 2017.06.10.