**Analysis of Socio-demographic Characteristics of Australian-based West Africans Survivals of 2014-2016 Ebola Epidemic during COVID-19 Pandemic**

**Abstract**

**Background**: This study investigated how the West Africans who survived Ebola virus disease (EVD) epidemic 10-years ago, but now living in Australia, perceived the psychosocial impact of COVID-19.

**Objective**: The objective of this report is to narratively describe the demographic characteristics of the study participants.

**Method**: The study was a sequential mixed methods involving online survey questionnaire followed by qualitative interview.

**Results**: A total of 68 participants initially subscribed to the online survey including approximately 51% women.

**Conclusion**: The distribution of participants into stratified age groups, education, marital status and occupation are described amongst others.

Key words: Ebola virus disease, Epidemic, COVID-19 Pandemic, Socio-demographic Characteristics

**Introduction**

This study survey comprised 35 item survey questionnaire including 32 closed-ended and three open-ended questions. Among the closed ended questions, number one was for consent. Out of initial 68 participants, this first question was used to exclude seven individuals (10.29%) who dissented. The second two question asked whether participant was living in West Africa during the Ebola virus disease (EVD) epidemic of 2014 – 2016. Response to this question was used to exclude another 15 individuals who never experienced the EVD epidemic. Among the remaining 46 respondents, one was under 18 years old hence excluded.

Further, the number of responses to questions varied, because participants could skip questions that they found uncomfortable to address. This was purposively to mitigate the stress that could have arisen in answering certain questions (Labott et al., 2013), as was highlighted in the participant information sheet provided at the beginning of the data collection. This led to a final sample size of N=36, and nine of them subsequently volunteered to participate in qualitative interview. It is pertinent to note that these numbers, though relatively small, still satisfied the original research plan of 30 respondents for online survey and three for interview (Onwuegbuzie & Collins, 2007).

Therefore, the demographic characteristics of participants presented in this report is N=36. This demographic report focuses on the participants age ranges, gender, occupation, marital status, education and places of residence in West Africa and Australia respectively. These 36 provided data, which would be become available on online repository (Mandoh et al., 2025), that was analysed in this aspect of the study. The objective of this study is to narratively describe the demographic characteristics of the study participants.

**Materials and Method**

This study is a sequential exploratory mixed methods study that incorporated 36 participants that participated in the online survey and their demographic characteristics are highlighted and discussed in this study. Additionally, 9 out of this number opted to participate in the semi-structured interviews. The demographic characteristics are reported in the section that follows.

**Results**

**Demographic characteristics of participants**

Age distribution: Table 1 shows that most participants were aged between 18 and 40 years: participants over 50 years were least represented; 53% of the participant population were female and 47% were male. While participants ages ranged from 18 to 70 years, their mean age was 38.4 with a standard deviation of 10.9. The next paragraph discusses participants’ employment status in West Africa and Australia.

Figure 1: Distribution of participants into stratified age groups

Table 1 shows that over half of the participants were employed during the EVD epidemic; those who were not were less than half of the population because one participant selected the stay-at-home option, which did not indicate whether they were employed or not. On the other hand, the table also shows that more of the participants were employed during the COVID-19 pandemic in Australia than during the EVD epidemic in West Africa. The next section will dwell on participants occupations.

Table 1: Employment status of participants during the EVD epidemic in West Africa and COVID-19 pandemic in Australia. (n=36)

|  |  |  |
| --- | --- | --- |
| Status | Section A, during the EVD epidemic in West Africa (n = 35) | Section B, during the COVID-19 pandemic in Australia (n = 36) |
| Freq | % | Freq | % |
| Employed | 18 | 51 | 31 | 86 |
| Unemployed | 16 | 46 | 4 | 11 |
| Stay-at-home | 1 | 3 | 1 | 3 |
| Total | 35 | 100 | 36 | 100 |

Table 2 shows that those who were students was the most represented category. The second most represented category was those who were unemployed during the EVD epidemic in West Africa. This category was followed by groups such as research and teaching, business and traders, office administrators and accountants, were equally represented. Though of lower representations, categories such as economic policy and economist, performance and policy analysts and others had equal representations. The disability support worker and single mother categories were the least represented.

Table 2 Occupation of participants in West Africa (n=28)

|  |  |  |  |
| --- | --- | --- | --- |
| Serial number | Occupation | Freq | % |
| 1 | Nurse /student | 6 | 22 |
| 2 | Support Worker | 1 | 3 |
| 3 | Unemployed  | 5 | 18 |
| 4 | Research/ Teaching  | 3 | 11 |
| 5 | Business/ Commercial trader/ Sole trader | 3 | 11 |
| 6 | Economic policy/ Economist | 2 | 7 |
| 7 | Office Administrator/ Accountant | 3 | 11 |
| 8 | Performance Analyst/ Policy Analyst | 2 | 7 |
| 9 | Others (Freight Forwarding, Security Superintendent,) | 2 | 7 |
| 10 | Single mother | 1 | 3 |
| Total |  | 28 | 100 |

Similarly, Table 4 categorises the occupations of West Africans who participated in this study in Australia. Comparatively, the table shows that the proportion of disability supports, and support workers were by far the most represented in Australia than the representation which they had in West Africa. Additionally, there were more nursing, nursing students and students in Australia than what was reported for West Africa. Of note, although some of the participants were unemployed in West Africa during the EVD epidemic, all stated that they were gainfully employed in Australia during the COVID-19 pandemic.

Table 3 Occupation of participants in Australia (n=32)

|  |  |  |  |
| --- | --- | --- | --- |
| Serial number | Occupations | Freq | % |
| 1 | Disability support worker/carer | 6 | 19 |
| 2 | Residential Care Worker/ Housekeeping Assistant | 2 | 6 |
| 3 | Support worker | 8 | 25 |
| 4 | Nursing/nursing student | 4 | 13 |
| 5 | Student | 3 | 10 |
| 6 | Builder | 1 | 3 |
| 7 | Civil construction | 1 | 3 |
| 8 | Contractor | 1 | 3 |
| 9 | Concrete Labourer | 1 | 3 |
| 10 | Engineer | 1 | 3 |
| 11 | Development | 1 | 3 |
| 12 | Economist | 1 | 3 |
| 13 | Truck Driver | 1 | 3 |
| 14 | None | 1 | 3 |
| **Total** |  | **32** | **100** |

This section will be followed by reports on participants’ marital status. Table 5 shows that more of the participants were married in West Africa during the 2014-16 EVD epidemic than was the case in Australia during the COVID-19 pandemic. Furthermore, while a participant was widowed in West Africa during the EVD epidemic, more were living with their partners in Australia than in West Africa. A higher proportion of the participants reported that they were living with their partners in Australia than when they were in West Africa during the EVD epidemic.

Table 4 Marital status of participants (n=36)

|  |  |  |
| --- | --- | --- |
| Responses | Section A, during the EVD epidemic in West Africa (n=35) | Section B, during the COVID-19 pandemic in Australia (n = 36) |
| Freq | % | Freq | % |
| Married | 24  |  67  | 17  |  48  |
| Widowed | 1  | 3  | 0  | 0  |
| Living with a partner but not married | 2  | 5  | 3  | 8  |
| Never married / Never lived with a partner | 8  | 22  |  13  | 36  |
| Other | 1  | 3  |  3  | 8  |
| Total | 36 | 100 | 36 | 100 |

The other paragraph will report on the participants levels of education during the EVD epidemic in West Africa and during the COVID-19 pandemic in Australia.

Table 5 Levels of education of participants (n=36)

|  |  |  |
| --- | --- | --- |
| Responses | Section A, during the EVD epidemic in West Africa (n=35) | Section B, during the COVID-19 pandemic in Australia (n = 36) |
| Freq | % | Freq | % |
| No formaleducation | 0 | 0 | 2 | 6 |
| Primary school | 2 | 6 | 0 | 0 |
| Secondary  | 11 | 31 | 12 | 33 |
| Post secondary | 20 | 57 | 19 | 53 |
| Prefer not to say | 2 | 6 | 3 | 8 |
| Total | 35 | 100 | 36 | 100 |

Table 5 shows that all of the participants acquired formal education before arriving in Australia, they further reported that a few were not formally educated whilst in Australia, but a higher proportion of the participants got secondary school education in Australia than in West Africa. However, the proportion of those who got post-secondary school education in West Africa was higher than those who got theirs in Australia. The next section will report on participants’ places of residence.

Figure 2 Participants’ countries of residence during the Ebola epidemic in West Africa (n=36)

Figure 2 shows that majority of the participants were resident in Sierra Leone which was followed by those who were in Nigeria, Liberia and Guinea during the 2014-16 EVD epidemic before they migrated to Australia which will be reported in the next paragraph.

Table 6 Migration in years (n=36)

|  |  |  |
| --- | --- | --- |
| Years | Australia (n=36) | Victoria (n=36) |
| Freq | % | Freq | % |
| 2016 | 19 | 53 | 15 | 42 |
| 2017 | 8 | 22 | 9 | 25 |
| 2018 | 5 | 14 | 3 | 8 |
| 2019 | 0 | 0 | 0 | 0 |
| 2020 | 4 | 11 | 9 | 25 |
| Total | 36 | 100 | 36 | 100 |

Table 6 shows that the highest proportion of participants migrated to Australia in 2016. This cohort was followed by those who migrated in 2017 and 2020 respectively. Nobody migrated to Australia during 2019. On the other hand, there was a similar representation of movements to Victoria. Movement to Victoria was highest during 2016. Although there was a tie in the number of people who located to Victoria in 2017 and 2020, but in 2019, nobody either migrated or resettled in Victoria.

Table 7 Location in Victoria (n=36)

|  |  |  |
| --- | --- | --- |
| Location | Frequency | % |
| Metropolitan (Melbourne and suburbs) | 31 | 86 |
| Regional urban (regional city or town) | 5 | 14 |
| Total | 36 | 100 |

However, Table 7 shows that whilst majority of the participants resettled in metropolitan Melbourne and its suburbs, a few chose regional urban cities and towns.

**Discussion**

**Distribution of participants into stratified age groups**

***Observation***

Thirty-six participants responded to questions three and four. That is *“In which age bracket are you; and What is your gender?”*. Cumulatively, the age range covering 18- 40 provided the greatest number of participants than any other age group in this study.

***Inference on the findings:***

This age represents the young and middle-aged people who are more inclined to migrate to other places in search of better opportunities and improved quality of life. Although that may not have entirely been the case here, considering the fact that the countries epicentre of the 2014-16 Ebola epidemic was just recovering from wars that dispersed people all over the world and followed by a humanitarian disaster in the form of the EVD epidemic could have contributed to this population of West Africans in Victoria- Australia.

***Supporting literature:***

Jalloh et al.(2018) noted the role of the wars that displaced many people in Sierra Leone prior to the EVD epidemic

***Significance of the findings:*** Researching this group provides an opportunity to access intra and intergenerational perspectives on issues that have impacted the lives of a large number of people. Furthermore, it is significant because it bridges the gap among such people thereby harmonising preparations and plans for managing future events that are likely to negatively impact the mental health of survivors***.***

***Implications:***

This finding will assist in making the voices of youngsters heard in crucial events such as the psychosocial impacts of infectious diseases outbreaks. Involving young people in research is important because it improves the scope and reach of the findings. It further projects the idea of inclusion in decision making especially for issues touching on the mental health of people. Young peoples’ involvement in research introduces the required energy into learning how to investigate issues and proffer sustainable solutions. Young people who intend to stay longer in healthcare service may find such knowledge useful in mentoring their peers in the workplace.

**Employment status of participants during the EVD epidemic in West Africa**

***Observation***

Though most of the participants were employed during the EVD epidemic, there was a high representation of those who were not employed during that same period of time.

***Inference on the findings:***

Although securing a paid job in low-income communities might be difficult, there must have been some people who were self employed in trades, mining and farming which helped to provide a constant flow of finance and livelihood for them. But with the EVD outbreaks in the most affected countries, the institution of infection prevention and control measures which included, community lockdowns and social isolation inadvertently caused some businesses to close causing unemployment and consequently financial difficulties.

***Supporting literature:*** Crea et al.(2022) noted that the IPC measures which were instituted to mitigate the rate of infection among people resulted to job loses Murray, Drew, Memmott, Bangura & Maring.(2021) maintained that community lockdowns exacerbated the joblessness and financial difficulties which were experienced during the EVD epidemic.

***Significance of the findings:***

This finding unearths some of the far-reaching negative effects of the EVD community lockdowns which affected every aspect of life including unemployment and financial distress.

***Implication:***

The implication is that the EVD epidemic and the community lockdowns significantly affected the health and employment of survivors that caused many people to lose their jobs which significantly impacted their financial statuses. Additionally, unemployment represents a serious social and developmental problem in EVD affected communities that required evaluation and focused intervention.A further research is required to determine how community lockdowns negatively impacted the employment statuses of people during the epidemic and how it can be mitigated in future disasters.The findings of this data could provide an avenue for learners to understand the role of employment in the financial functionality of individuals in crisis situations. Knowledge of the role of employment in practice can be useful in determining ways of enhancing job security and satisfaction.

**Occupation of participants in West Africa and Australia**

***Observation***

A lesser proportion of the participants reported on their occupations in West Africa and the most represented category in Table 3 is nurse/students which is followed by those who stated that they were unemployed during the EVD epidemic. Majority of the participants were into business/ commercial /sole traders which were minimally represented. Comparatively, more of the participants reported on their occupations during the COVID-19 pandemic in Australia in Table 4 and, disability/ support workers, nursing/ nursing students represented more than half of the participants ‘numbers.

***Inference on findings***

Comparatively, the results show that more of the participants reported that they were employed during the COVID-19 pandemic in Australia than was the case in West Africa during the EVD epidemic and were mainly in the healthcare, disability support care and engineering sectors. Out of the few who reported on their occupations in West Africa, very few were in the healthcare industry and majority were in the commercial and economics trades. This scale of unemployment and avoidance of the healthcare sector can be related to fear of infection based on the scale of illnesses and the EVD sequelae among people in general and healthcare workers. This limited employment justifies the provision of financial supports to all categories of survivors which was absent at the peak of the EVD epidemic.

Additionally, the post EVD antisocial behaviors such as stigmatisation of healthcare workers may have driven people away from the carer and healthcare industry which seems to be very popular amongst West Africans in Australia during the COVID-19 pandemic. Despite the high employment of West Africans in the healthcare industry, financial and social supports were provided for all eligible Australians during the COVID-19 pandemic.

***Supporting literature***

Ji et al. (2017) observed that there was a high level psychosocial symptoms among their cohort that may have been associated with the widespread infection and deaths among people and healthcare workers. Similarly, Schindell et al.(2024) noted that jobs in the healthcare industry were not fancied among people during the EVD epidemic which may have been because of the heightened risk of infection with the EVD. Murray et al.(2021) maintained that even those who were already employed in the healthcare fields, concealed their employment statuses to avoid the wrath of public during the epidemic. Conversely, although there is an observed high employment in the healthcare field in Australia during the COVID-19 pandemic, researchers such as Holton et al.(2023) advocated for more support for nurses and midwives. Similar to this, Smallwood et al.(2021) noted the psychological and physical impacts of the COVID-19 pandemic on healthcare workers and recommended additional supports for them.

***Significance of the findings***

 The significance of this finding is that fear related behaviors and the consequences of the illness with the EVD caused occupational and even those who were recovering could not readily secure or return to their jobs which requires addressing to promote social inclusion in the post EVD period. Additionally, despite the seemingly high representation of the healthcare jobs during the CIOVID-19 period, more focused attention should be provided for healthcare workers and those in the engineering fields. Just as was the case in Australia during the COVID-19 pandemic, the scale of unemployment in West Africa during the EVD epidemic justified the need for government social support to EVD survivors including those who were not infected.

***Implications***

The implication is that despite the difference in the employment and social supports that were provided for West Africans during the EVD epidemic and the COVID-19 pandemic, it is certain that these disease outbreaks severely impacted the participants in this study and require continuous assessment and targeted supports. Finding can be useful in targeting migrants for further job apprentices and training to help them settle into their new homes in Victoria, Australia.

Job security enhances the financial stability of many people, plans and programs directed at providing and maintaining jobs during disasters should be introduced in to affected communities. More research should be done to identify how job security may or may not significantly impact EVD survivors residing in Australia.

**Marital status in West Africa and Australia**

***Observation***

Though one participant did not indicate whether he/she was married during the EVD epidemic in West Africa, over half of the participants were married which is reflective of the supportive role of marriage in the West African culture. The West African culture strongly support marriage and as social institution which culturally guarantees the protection and recognition of individual’s communal rights, status and social support especially during celebrations and crisis such as the EVD epidemic (Richards et al., 2015).

***Inference on the findings:***

Marriage in the West African culture improves social inclusion and extension of family ties which is a vital support system that enhances coping during disasters such as the EVD epidemic. Evidently, family support system was handy especially when government supports at the peak of the disaster was suboptimal in the epicenter of the epidemic.

***Supporting literature:***

Researchers such as Murray et al.(2021) observed that individuals relied on family support during the EVD epidemic.

***Significance of the findings:***

The utilisation of social support system through marriage during disasters can be comforting and encouraging the survivor in the sense that it aids rapid recovery from the shock of the event.

***Implication***

This study revealed that over half of the participants were married which can be a vital support system for both partners. In illness situations or life challenging events, in Africa women assume the responsibility of providing initial care and provided the needed support before help arrives. Therefore, marriage can be considered as a means to a vital resource that will assist the affected individuals in precarious situations. Though the direct role of marriage in research may be unclear, but it is known for improving stability relationships and playing supportive roles in certain situations. However, the contribution of married people to research can be investigated in further studies among survivors of disasters such as the EVD epidemic. Married partners can mentor young individuals who might be willing to learn the skills of establishing sustainable social relationships in their surroundings

**Levels of education in West Africa and Australia**

***Observation***

Though findings show that all of the participants acquired a minimum of secondary school education, just a few were able to accomplish post-secondary school education before migrating to Victoria-Australia.

***Inference on the findings:***

 Although remote learning was introduced, it was suboptimal and limited to those who were living in major urban cities. The closure of schools and cessation of face-to-face learning significantly affected education at all levels during the epidemic.

***Supporting literature:***

Murray et al.(2021) maintained that the institution of IPC measures such community isolation and lockdowns led to the closure of schools which disrupted the education and learning of children during the epidemic.

***Significance of the findings:***

This finding highlights the negatived impacts of community lockdown on education in the epicenter of the EVD epidemic.

***Implication***

This finding implies that the EVD epidemic and its control measures undermined the smooth accessibility to education that consequently led to elevated levels of school dropouts. Data provided by this finding can assist the generation of hypotheses that will aid in investigating the impact of the EVD lockdowns on education in other EVD affected communities. Policy makers can utilise the findings from this data to devise way of ameliorating the negative impacts of community lockdowns on education during disasters.

**Participants’ countries of residence during the Ebola epidemic in West Africa**

**Migration in years**

***Observation***

Data showed that excluding 2019 which did not record any migration to either Australia or Victoria, in all other subsequent years, there was a steady flow of West African migrants to Victoria and majority of these migrants settled in metropolitan Melbourne.

***Significance of the findings:***

The regular migration into Victoria-Melbourne signifies the premium which the state places in migrant communities’ inclusion socially. Additionally, significance of this observation is that Victoria- Melbourne has been welcoming to migrants and promotes the ideals of multiculturalism which increases its attractiveness to new arrivals. Additionally, this disparity in population migration between metropolitan Melbourne and rural urban regions emanates from attraction to more housing, job, recreation and many other amenities in Melbourne than regional and rural areas

***Implication***

The implication of this finding is that new arrivals inject new energy and boost the skills pool which enhances sustainable development. The migrants can serve to promote further research and understanding of migrant health in their new home city such as Melbourne. Additionally, the location of migrants in Melbourne may have been as a result of the many amenities and services that can be easily accessed to help them settle within a short period of time.

**Location in Victoria**

***Observation***

Though most of the participants did not own a plot of land in West Africa, some did, and it was considered a precious possession.

***Inference:*** not owning a plot of land does not mean that participants were not interested in owning it, but it can be attributed the complex family and land tenure system that can be prohibitive in some cases that limit access to such priced possessions.

***Significance of the finding***

This finding brings to the fore the customary land ownership system in West Africa where land where land is considered an invaluable personal and communal possession.

***Implication of finding***

The findings implies that there are a smaller number of people who own plots of land they might hinder further investment in the development of these plots of land. Additionally, these plots of land can be utilised for income generating activities such as farming and mining. Therefore, land ownership laws in West Africa should be flexible to facilitate further investment and developments of these places.

***Conclusion***

The demographic characteristics of participants shows that most of the participants were within age range 18-40 years and a large number of people and whilst some of the participants were unemployed in West Africa, all of the were employed in Australia. Over half of the participants were married in West Africa during the EVD epidemic, more were living with their partners in Victoria – Australia. All of the participants were able to acquire formal education before relocating to Australia. Additionally, majority of the West African migrants resided in Melbourne -Victoria. It is recommended that further research must be done to determine the long-term effects of the EVD epidemic on the psychosocial lives of migrants in Australia.

**CONSENT**: Participant’s Consent was given in writing before the study commenced.

**ETHICAL APPROVAL**: Approval given by the Charles Sturt University, New South Wales, Australia (Approval number H20325).

**COMPETING INTEREST**: No competing interest

**CONFLICT OF INTEREST**: There is no conflict of interest in this research.

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