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Study protocol for psychosocial impacts of COVID-19 pandemic on Australian based West Africans who survived the 2014-2016 Ebola epidemic

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Psychosocial impact rese...



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We use this protocol and it's working

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Abstract

During this COVID pandemic, people from West Africa had previously experienced the trauma associated with Ebola virus disease (EVD) epidemic. Therefore, this study on psychosocial impact of COVID-19 pandemic intends to evaluate how the experiences from EVD epidemic among West Africans translates into evidence-base for health education and mental healthcare. The objective of the article is to describe the research process and some related underpinnings.

Image Attribution

All images are created by the researchers, excepted where indicated by citation

Introduction

1 Large-scale infectious disease outbreaks including epidemics and pandemics have affected the world, and West African countries such as Liberia and Sierra Leone, and to a lesser extent Guinea are no exception. The negative impact of disease outbreaks on these countries' populations are known, especially their health and healthcare delivery systems (Buseh et al., 2015). The recent increases in disease outbreaks such as EVD and COVID-19 in West Africa (Onyekuru et al., 2022), therefore, require a robust healthcare delivery system to manage and mitigate the impacts of the outbreaks. The impact on the psychosocial health of those who survived the EVD epidemic and now experience the COVID-19 pandemic is not clear.

This study therefore investigates the psychosocial impact of COVID-19 pandemic on West Africans who survived the EVD and now live in Victoria, Australia. The objective is to identify how the experience of coping with EVD can be translated into health education for self-management in future disease outbreaks. Fig 1 is a graphical summary of the study' concept. This is part of doctoral research, and at this juncture, the specific objective of this article is to describe the study protocol.

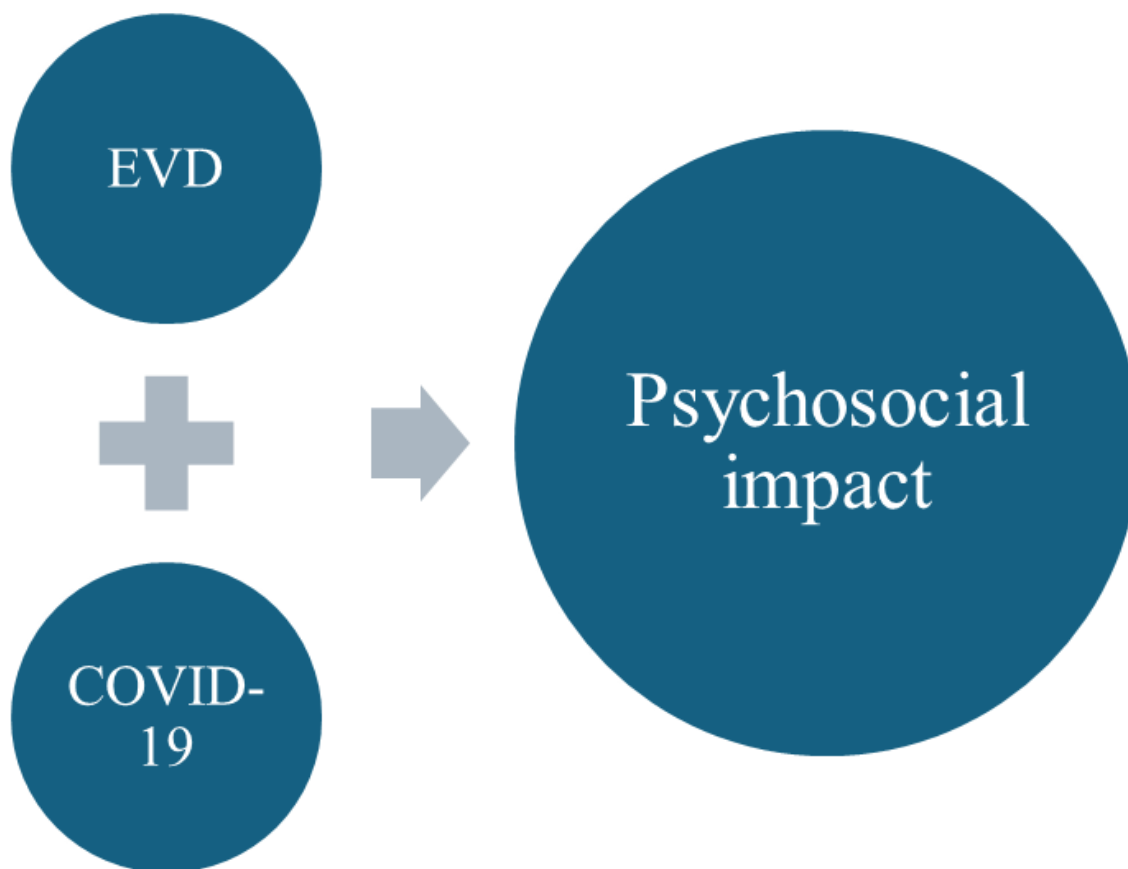


Fig 1. Graphical concept of the study

The Protocol

- 2 The study has been preceded by a research proposal/protocol, which presented the planned study design and the subsequent analysis of data in this study. The proposal was initially presented at a regional health conference in New South Wales, Australia; and published by the Charles Sturt University (Mandoh et al., 2020).

Study design:

The study is designed to be a sequential exploratory mixed method. This research approach is chosen to understand the problem being investigated, utilising a combination of methods, which include participant interviews, observations and questionnaire (Gbenga, 2023; Gogo & Musonda, 2022; McBride et al., 2019) for better exploration and understanding of the research topic.

Sampling:

Is described as the selection of a subset of a population with similar characteristics to provide information about the larger population (Martínez-Mesa et al., 2016; Vasileiou et al., 2018). Sampling can be probabilistic or non-probabilistic viz, in a probabilistic method, all samples have a chance of being selected but in non-probabilistic, participants do not have equal chances of being selected for study. Non-probabilistic sampling was done to increase the chance of recruiting correct samples that provide invaluable information to enhance clarity and understanding. As Drabble (2018) suggests that the utilisation of non-probability sampling is intended to strengthen the topic's understanding and improve the study's rigour. Non-probability sampling involves a deliberate selection of participants based on their depth of knowledge, which is crucial for providing relevant data to the phenomenon of interest (Etikan et al., 2016; Suen et al., 2014).

The rationale for this non-probability sampling method of sample selection is on selecting participants who are knowledgeable on the research topic, to provide in-depth and rich data on the topic. According to Galloway (2005), non-probability sampling techniques enable a researcher to focus on a targeted population for the investigation of a topic of interest. Therefore, considering the unique nature of the West African 2014–16 EVD epidemic survivors in Victoria, Australia; and researcher's desire to determine the psychosocial impacts of COVID-19 pandemic on this cohort, a non-probability convenience sampling method was deemed appropriate to identify and recruit participants from West African 2014-16 EVD epidemic survivors residing in Victoria at the outbreak of COVID-19 pandemic.

Study population and setting:

This research is based in Victoria, Australia and centred on West Africans who had experienced the 2014–16 EVD epidemic but were currently living in Victoria, Australia (Fig 2). They are expected to have knowledge and experiences from both West Africa and Australia that allows them to provide credible information. In this study, West Africans are described as those born in the countries comprising West Africa, which is located in the westernmost region of Africa (Fig 3).



Fig 2. A map of Australia showing the state of Victoria in red

Extracted from <https://ontheworldmap.com/australia/state/victoria/victoria-location-on-the-australia-map.html>

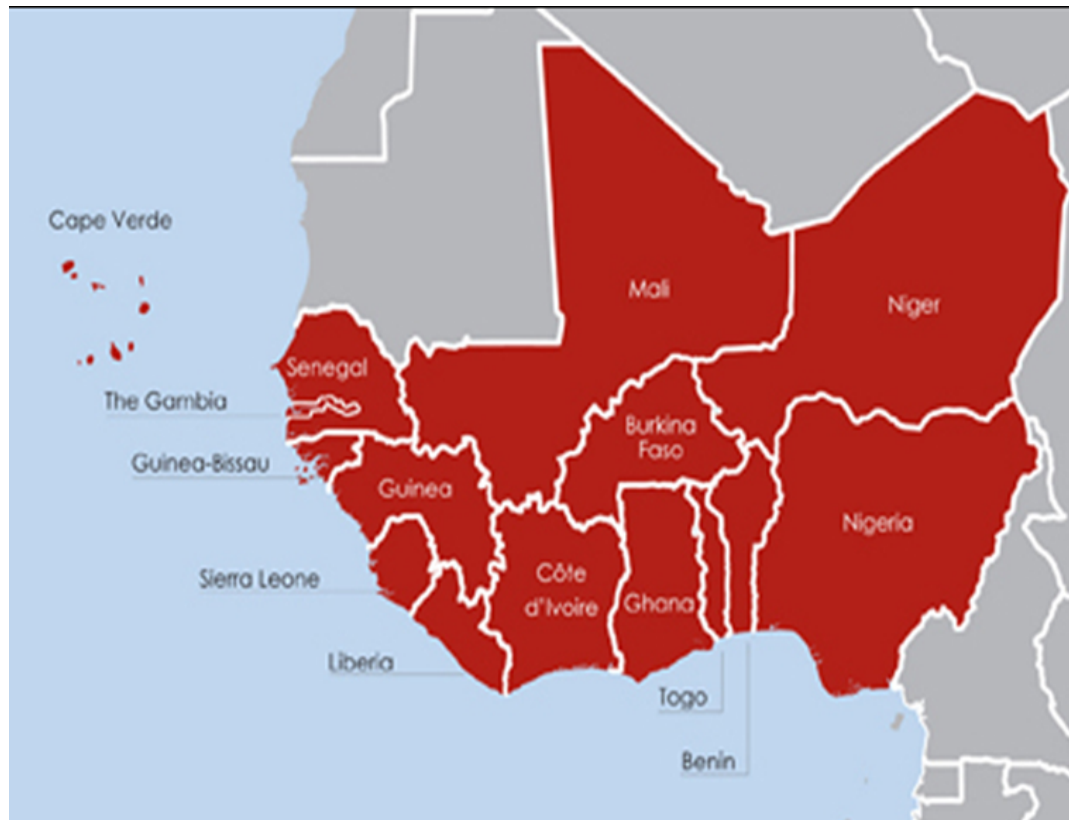


Fig 3. Map of West Africa showing individual countries

(Adapted from <https://www.capacityplus.org/technical-brief-2/content/addressing-west-africa's-health-workforce-crisis.html>)

This is undertaken in the state of Victoria, Australia because of the state's 'commitment to supporting Africans' and multiculturalism which has long been an attraction for Africans and other migrants in general, to settle here (Victorian Government, 2018). In 2016, 4,553 West African resided in Victoria (Australian Bureau of Statistics, 2016). By 2020, there was a sizeable population of sub-Saharan Africans in the state (192,000 or 48% of migrants) (Victorian Government, 2020). According to the Victorian Multicultural Commission, the migration rate in 2020 into Victoria was 2.1% annually, which was described as the highest in Australia, and included 1.6% African migrants (400,000) (Victorian Government, 2020). However, the population projection dropped to 0.9% in 2021 (Australian Government Centre for Population, 2022). Considering this high migration to Australia and Victoria, a significant African population in this state could potentially carry a burden of trauma arising from family separation, culture shock, wars and disasters (Babatunde-Sowole et al., 2020; Ikafa et al., 2021).

Participants

West Africans who survived the 2014-16 EVD epidemic, live in Victoria, Australia and meet the inclusion criteria are the focus of recruitment. Invitations will be distributed through emails to social media groups e.g., WhatsApp relating to countries of origin such as the Nigerian Society of Victoria and the Sierra Leone Community of Victoria (SLACOV) for persons to participate. Further, multicultural community groups such as Monash multicultural group, which covers various subgroups in the Monash city council area have agreed to forward the invitation to other related groups in Victoria. There are arrangements for announcements about the research in a multicultural church, a fellowship group and mosque visited by West Africans in Melbourne. The survey link is provided to members of these groups through SLACOV and through some members that visit these institutions. Access to the participants information sheet is by clicking on the survey link which will be included in the emails to targeted individuals and groups. The participants' information sheet and consent precede the demographic section of the survey.

Inclusion criteria

Residents of Victoria and were in West Africa during the 2014–16 EVD epidemic; participants who are at least 18 years old at the time of data collection for this study; and literate in English to give consent and participate in the research.

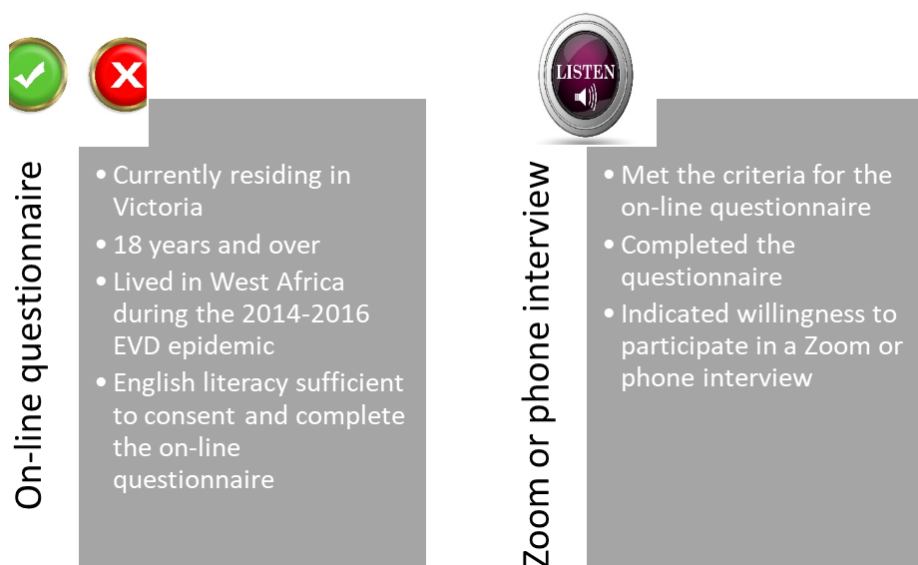


Fig 4. Inclusion criteria in this study

Exclusion criteria

Persons under 18 years of age and/or had not lived in West Africa during the 2014–16 EVD epidemic.

Sample size

Calculations to determine the sample size require identifying the recent Australian census data indicating the number of West African people in Victoria, Australia (Australian Bureau of Statistics, 2016). Computer software, viz RaoSoft sample size calculator, will be used to calculate sample size at a 90% confidence interval. Sample size will take note of Lusardi (2017), who reported that a minimum of 30 participants is generally sufficient for surveys in mixed studies. Further, while Boddy (2016) highlights that the sample size depends on the study's context and paradigm, another cognizance is taken that at least 3 participants are required for interviews in a sequential mixed-methods design (Onwuegbuzie & Collins, 2007p.290). A description of the process for development of the survey follows below.

The Process

- 3 The set-up process comprises the following initial three steps summarized in figure 5. The survey process, which is sequential in execution, is viewed in linear (Fig 6) and as triangulation (Fig 7) perspectives.

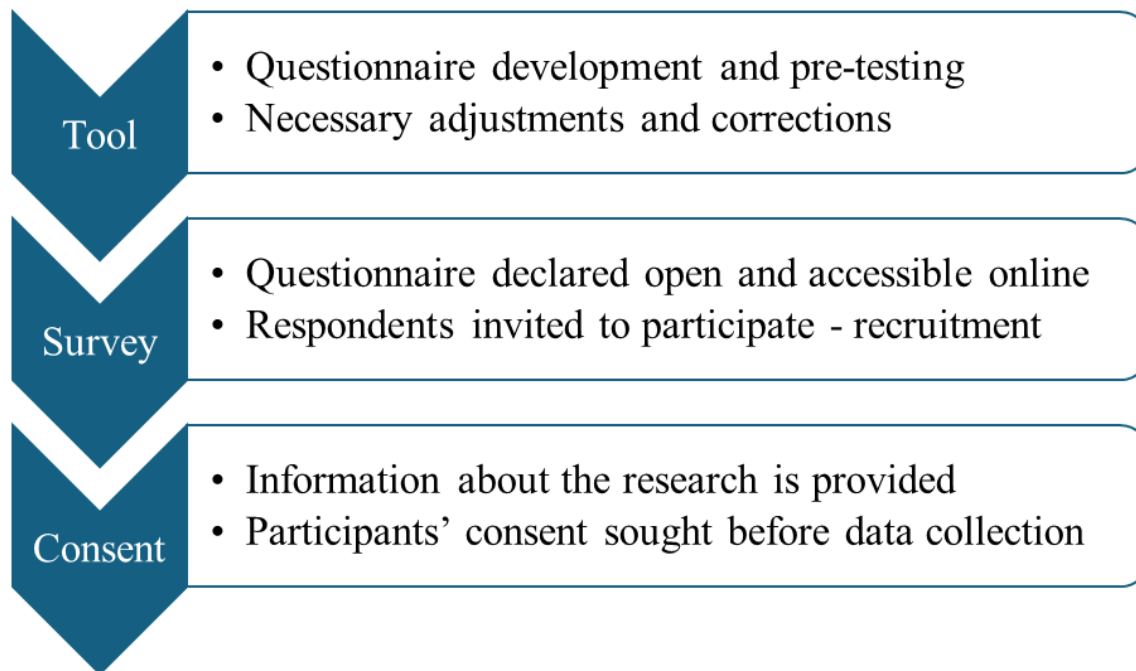


Fig 5: Summary of the initial three steps

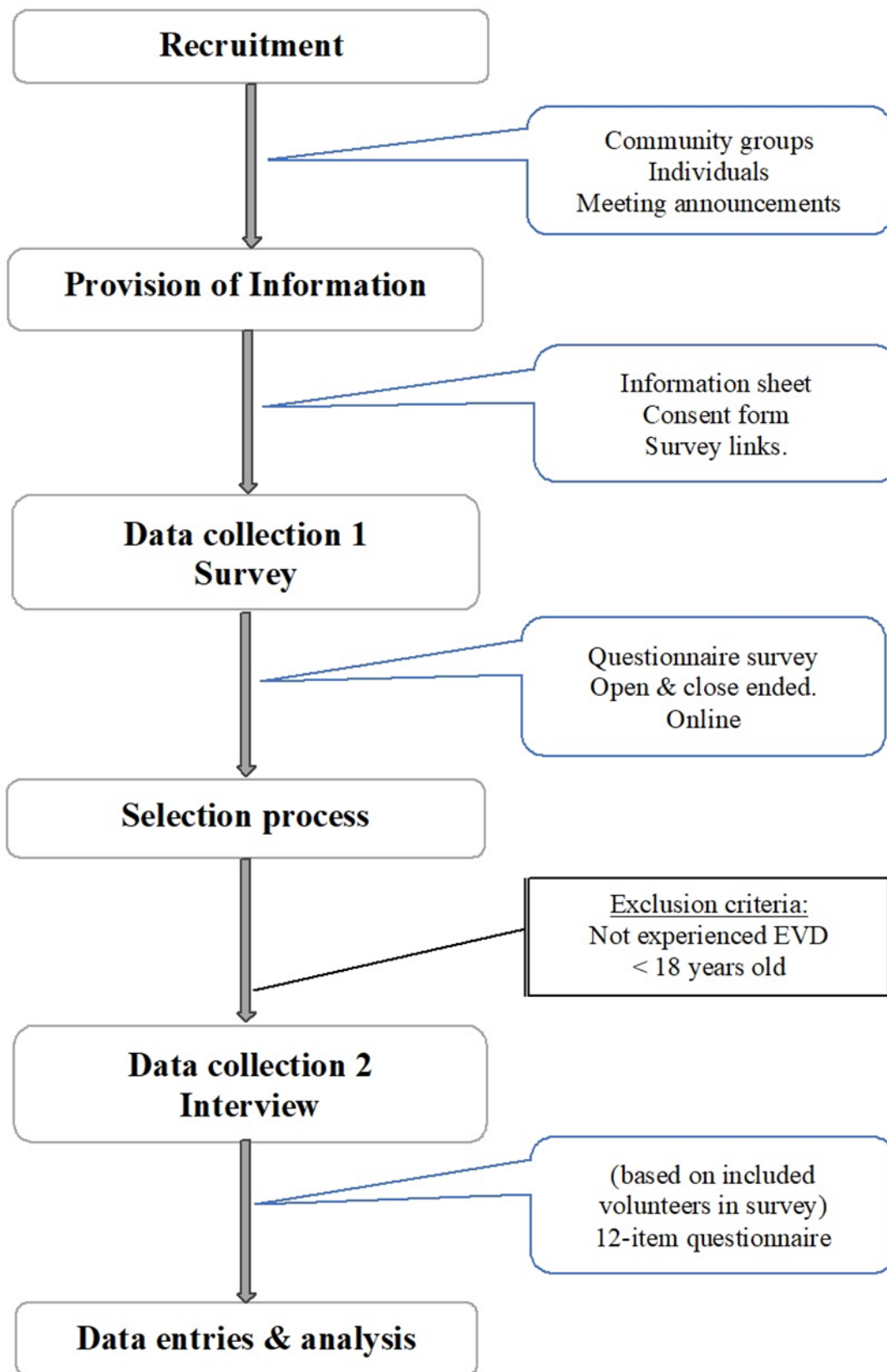


Fig 6: Linear dynamic flow of data collection

The findings from both the quantitative and qualitative component of the study will be triangulated. The triangulation explains how the survey; closed-ended and text-based questions as well as the interview integrate. Another triangulation is in the qualitative datasets from the qualitative component that comprises responses to text-based questions in the survey and semi-structured interviews (Fig 7).

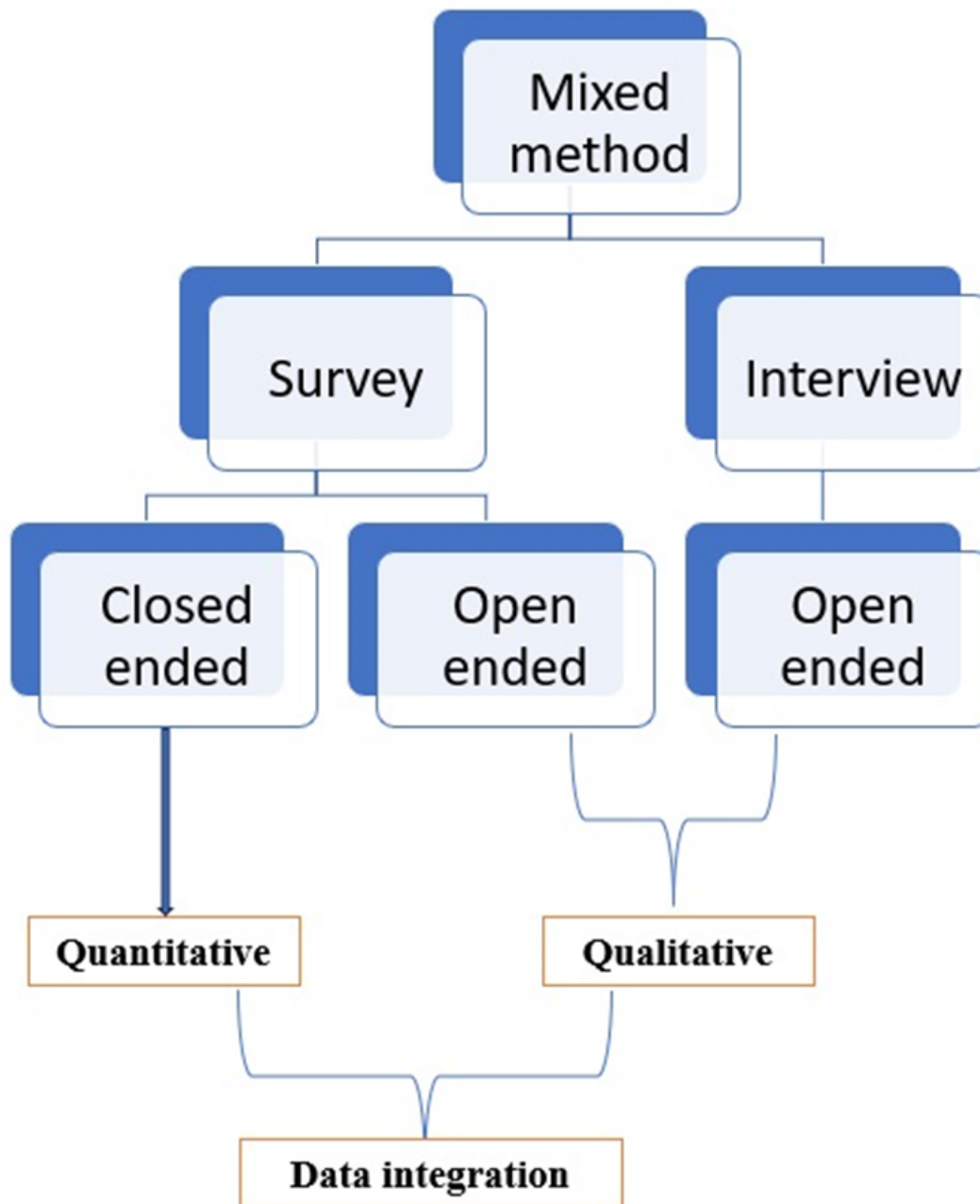


Fig 7: Triangulation perspective of dynamic flow chart of data collection

The purpose of triangulation according to Gogo & Musonda (2022), Draucker et al. (2020) and Valencia (2022) is that data from the quantitative component i.e., closed-ended questions in the survey can help analyse and explain the qualitative aspect, which are responses to the text-based questions in the survey and interview of the study. This methodological combination ensures comprehensive exploration of the phenomenon of interest (Valencia, 2022).

Development of survey and questionnaire

A survey is a systematic approach to collect data to describe features or characteristics of an event(s) or occurrences in a particular population. Surveys utilise various forms, such as interviews, and standardised questionnaires, including handwritten and electronic (Ponto, 2015). Data collection tools and questions are presented in a simple format for better understanding and response to the research objective, which adds to the reliability of the study. Developing the survey began after approval from the Human Research Ethics Committee of the Charles Sturt University (H20325).

The survey will assess the psychosocial impact of COVID-19 pandemic on Australian-based West Africans who survived the 2014–16 EVD including: participant's information, consent, participants' demographics, and main body of survey with subsections. Further, the main body of questionnaires has three subsections on: past trauma history, present psychological distress, and coping strategies during the EVD epidemic and COVID-19 pandemic.

Besides the first question to indicate consent, the main survey is a combination of quantitative (n=31 closed-ended) and qualitative (n=3 open-ended text-based), which will be used to answer the research questions. It also includes inquiry into social supports during the EVD epidemic and COVID-19 pandemic, and quality of life during the COVID-19 pandemic. A minimum of 30 West Africans who survived the 2014-16 EVD epidemic in West Africa now living in Victoria, Australia is targeted for recruitment.

This survey will be accessible on mobile phones, tablets, and computers. The information sheet includes the purpose of the study, and that participation is voluntary with no reprisal for withdrawal. Participants are assured of anonymity and secure storage of data. The contact details of the primary researcher, supervisors as well as The Governance Officer Human Research Ethics Committee of the Charles Sturt University are given for concerns or complaints about the research.

Pre-testing done

The Spatial Data Analysis Network (SPAN) manager, to develop the first stage compilation of the survey. Individuals matching the intending participants i.e. six adult West Africans were identified and contacted in Melbourne. These provided feedback about the readability and understanding of the questions and ease of access to the survey. Feedback from participants demonstrated an understanding of the questions, and the researcher made a few recommendations to his principal supervisor and the SPAN manager, who made the necessary adjustments to the questionnaire before the survey commenced.

Delivery of survey:

The survey will be implemented through the Charles Sturt University Gold standard online platform-survey monkey for easy reach and security as it has determined difficult for face-

to-face data collection during COVID-19 pandemic lockdowns. The survey will be posted on social media platforms such as WhatsApp of community groups such as the Monash Multicultural Committee for onward distribution to African communities.

Data collection:

Considering the infectious nature of the COVID-19, social distancing, and the travel restrictions will be collected online and will require participants to read and write and to possess electronic devices such as mobile phones, iPads or computers. Participants have the option to be accompanied by somebody for support during data collection and can respond at a pace that suits them; as well as enablement to save and continue later. Participants will access the questionnaire via a link provided in the invitation emails. Data will be collated and stored electronically.

Questions addressing research objectives

Table 1 outlines the general research questions in the survey and indicates if the questions were closed or open ended.

Table 1: How the 35-item survey questionnaire matches the specific research questions

No*	Research questions	Closed	Open
1	How have West African EVD survivors been impacted by the EVD pandemic?		✓
	How have West African EVD survivors been impacted by the COVID-19 pandemic?		✓
2	What coping strategies did EVD survivors use during the EVD epidemic?	✓	
	What coping strategies do EVD survivors use during the COVID-19 pandemic?	✓	
3	What level of social support did EVD survivors receive in West Africa during the epidemic?	✓	
	What level of social support do EVD survivors receive in Australia during the COVID-19 pandemic?	✓	
4	What was the frequency of exposure to traumatic events by EVD survivors while in West Africa?	✓	
5	Please describe your strongest memory, i.e. what you remember most of the Ebola epidemic for: (a) yourself (b) your family (c) your community.		✓
	Please describe your most substantial feelings now and what you are likely to remember most of the COVID-19 pandemic for: (a) yourself (b) your family (c) your community.		✓
6	Influence of surviving EVD		✓
7	Life satisfaction scale	✓	

*Not in sequential order of the specific research objectives

Other items in the questionnaire include questions that are necessary for ethical requirement, selection criteria, and sociodemographic characterization of the participants. The online survey prepared by the University's SPAN and available at: <https://www.research.net/r/EVD-COVID>

Tools in the

survey 1 – Quantitative component

At the inception of this research, an objective was set from which the research questions were developed. The following validated self-report measures are incorporated into the online survey: the Kessler-6 Psychological Distress Scale, Life Satisfaction Scale, Trauma

History Screen, Brief-COPE, and the Oslo Social Support Scale, each of which is described in more detail in the following sections.

The Kessler 6 Psychological Distress Scale

The Kessler-6 Psychological Distress Scale was developed by Ron Kessler and Dan Mroczek in 1992. This tool was first used during the United States National Health Interview Survey (Australian Bureau of Statistics, 2012) and US National Household Survey on drug abuse. It was found to be effective in identifying moderate psychological distress among the population (Kessler et al., 2002). The Kessler 6 Psychological Distress Scale is a reliable, short, 6-point self-reported distress measurement scale to assess each level of psychological distress in a participant. Responses to the K6 are rated with a 5-point Likert scale ranging from 0–4 where ‘0’ means none or never, ‘1’ small, ‘2’ some, ‘3’ most, and ‘4’ all (Ferro, 2019; Mewton et al., 2016). It is a self-report distress scale asking the person to rate their level of distress over the previous 30 days (Easton et al., 2017; Shon, 2020), and has internal consistency and reliability (Cronbach’s $\alpha = 0.89$) (Kessler et al., 2002). This tool’s precision in the ‘90th to 99th percentile for measuring of their past trauma history EVD, and recent one month psychological distress for COVID (Cotton et al., 2021; Kessler et al., 2002). Its psychometric properties are consistent across sociodemographic groups hence has been used by WHO and the Canadian government in social surveys.

The Kessler-6 Psychological Distress Scale was used by Biddle et al. (2020) in their study entitled ‘Hardship, distress, and resilience: The initial impacts of COVID-19 in Australia’ to assess the level of psychosocial distress experienced by Australians during the initial stage of the COVID-19 pandemic in Australia. The Kessler’s psychosocial distress tool was incorporated in the online survey as it has been demonstrated to effectively identify ‘severe mental health problems in adults’ (Mewton et al., (2016).

The Trauma History Screen

The Trauma History Screen (THS) assesses trauma lasting more than 30 days in an individual. It is an easy-to-use scale that is brief and self-reporting, developed by Carlson et al. (2011) to evaluate past distressing occurrences. The THS was tested among veterans, trauma patients, students, and random individuals in the community in 4 samples in the USA. This tool has not been validated in this cohort, which is a limitation. Other tools that can be utilised in assessing trauma history in such situations are long and complex. The THS which is short and easily understood and can be used in clinical and non-clinical situations (Hooper et al., 2011). This tool is essential to this research because participants had experienced various traumatic events like the USA cohort, and these experiences include the 2014–16 EVD epidemic, wars, floods, and other forms of violence in West Africa, before they to Australia. Screening for trauma history among these participants can determine if they are still affected by the impact of past events. THS is used to reliably identify trauma symptoms in people exposed to stressful events such as hurricanes and other disasters that negatively impact on mental health. For instance, the THS was used by Cusack et al. (2004) in their studies entitled ‘Trauma History Screening in a Community Mental Health Center’, to assessed the “lifetime prevalence of traumatic events” from which

it is strongly suggested that routine screening for trauma history can improve the rate of diagnosis of post-traumatic stress disorder.

The Brief-Coping Orientation to Problems Experienced (COPE)

The Brief-COPE-28 (Abdul Rahman et al., 2021; Carver et al., 1989) is a shortened version of the COPE-60 (Abdul Rahman et al., 2021) that gathers data in 14 areas on the tool. This tool assesses the effective and ineffective coping strategies in people who experience stressful events, and determines how they cope. It includes three areas such as problem-focused coping, emotion focused and avoidant coping (Carver, 1997). It was authenticated on 168 community participants who were affected by Hurricane Andrew in Florida in the USA (Carver, 1997). This study will use the Brief-COPE because it has been tested and shown to have a high validity and internal consistency across cultures (Abdul Rahman et al., 2021; Kadi et al., 2023; Nunes et al., 2021).

The Oslo Social Support Scale-3

The 3-item Oslo Social Support Scale assesses each item with its response or scaling system (Kocalevent et al., 2018), including: Item 1 with 4-response options: none (i.e '0'), 1–2, 3–5 and 5+. Item 2 has 5-response options: none, little, uncertain, some, and a lot. Lastly, item 3 has 5-response options: very difficult, difficult, possible, easy, and very easy.

It is used to assess the level of social support received during or after an event hence utilised in epidemiological and population surveys. The Oslo Social Support Scale has been used in West Africa by Mohammed et al. (2015) to evaluate the 'Psychological distress and social support of survivors and contacts of EVD and their relatives in Lagos, Nigeria: A cross-sectional study – 2014' during the 2014–16 EVD epidemic. As McGuire et al. (2018) in a study on the moderating effects of social support on disaster victims during Hurricane Katrina in the USA, reported that social support was a significant factor in relieving the effects of disasters on victims. The current study, therefore, included the Oslo Social Support Scale to gather data on the level of social support participants received during the EVD epidemic and the COVID-19 pandemic, respectively.

Life Satisfaction Scale

Life satisfaction according to Sancho et al. (2014) is an individual's self-description of their quality of life based on their determined parameters. This scale involves asking a participant about 'How satisfied are you with life overall?' and allows participants to self-evaluate their lives with respect to well-being (Australia Institute of Health and Welfare, 2021,p.24-25).

A score of '1' means the lowest with '10' being the highest. Biddle et al. (2020) used this Life Satisfaction Scale (2020) to determine the level of life satisfaction among the participants. The rationale for adding this question was to determine what participants' felt about their quality of life and well-being especially when the COVID-19 pandemic and its containment measures negatively impacted lives. An example of how COVID-19 containment impacted the lives of Australians was restriction of movement and social isolation of Australians that according to Biddle et al. (2020p.23) negatively impacted the quality of life of Australians.

Tools in the survey 1 – Qualitative component Open-ended questions in the survey

This component of the survey comprises free text responses to the following four questions: What is the strongest memory of events of EVD survivors during the EVD epidemic? What is the strongest memory of events of EVD survivors during the COVID-19 pandemic? How have West African EVD survivors been impacted by the EVD pandemic? How have West African EVD survivors been impacted by the COVID-19 pandemic?

McLaughlin et al. (2022) outlined six steps in text-based data analysis which include: determination of the purpose of the analysis, data collection process, data preprocessing, data matrix creation, text analysis, and interpretation. Following this format, the initial purpose of collecting text-based data is to provide enriched information to address the aim of the study. Another is to garner data from the exploration of the experiences of West Africans impacted by previous traumatic events including the EVD epidemic, and the COVID-19 pandemic in Australia. Following determination of the aim of this study is data collection. Text-based data, focuses on the questions mentioned will be collected from the summaries in the online survey. The contents will be scrutinised for determination of flow of ideas, patterns of responses and to ensure that the meanings of words are captured. A data matrix will be formed where words are placed into columns to for themes and subthemes. Word cloud analysis will be performed (Atenstaedt, 2017), and findings generated to aid evaluation and to demonstrate the frequency and level of emphasis on words retrieved from participants' responses. Studies show that these processes the research's reflexivity and experience with the topic through the stages that follows in the research implementation (Dawadi, 2020).

The purposive and sequential sampling designs

As qualitative research mostly embraces purposive sampling, and participants for this part of the research will similarly be purposively selected, to represent a cohort that provide informative data on the psychosocial impacts of EVD and COVID-19. Boddy (2016) suggests that qualitative research seeking an in-depth understanding of a phenomenon requires as few as one participant. However, there is another suggestion that up to three participants are required in an interview component of a sequential mixed-methods design (Onwuegbuzie & Collins, 2007p.290) The sequential research design: at the end of the survey, involves participants being invited to be interviewed in individual semi-structured sessions so that they further describe their experiences and the personal impact of living through EVD epidemic and COVID-19 pandemic. Participants will be invited through their contact details and a scheduled time for the interview organized.

Interviews

Interview constitutes a dialogue between a researcher and the participant utilising prepared questions. (De Jonckheere & Vaughn, 2019). In other words, it gives the participant a voice on the topic being investigated. The purpose of interview is to accord the participant opportunity to provide unhindered in-depth and nuanced information on a topic. Therefore, a Zoom link, will forwarded to the prospective interviewee, with the schedule dates and times to be confirmed by participants prior to the interviews.

The interview tool – Table 2

Table 2: Interview questions

Item number	Questions
1	Have you experienced difficult times in your life?
2	Would you give me examples of difficult times?
3	Can you tell me about your experience of the Ebola epidemic?
4	How do you think that surviving Ebola has changed your life?
5	Can you tell me about support during that time that helped you survive?
6	What strategy did you use to cope during the epidemic?
7	Can you tell me about your experience with this COVID-19 pandemic?
8	Do you have support that is helping you?
9	What strategy did you use to cope during the pandemic?
10	Are there times when you find it difficult to manage your distress?
11	Finally, please tell me how satisfied you are with life overall.

Conducting the interviews

The interview is part of the application that was approved by the CSU ethics committee. This qualitative data collection instrument comes after the quantitative closed-ended and qualitative open-ended questions in the survey. Finally, the participants would be informed of their freedom to stop the interview at any time; and if they need any support or want to leave, it could be done without any fear of indifference to them or punishment, and that their confidentiality will be assured. The participants advise the time of their availability and preferred mode of interview, which is either through telephone or via Zoom. The interviews focus on providing more nuanced data to reinforce collected data. Provision will be made for a third party during the interview. This approach is justified by Quetulio-Navarra (2015) who noted that the presence of third parties during research interviews does not impact the process negatively but may enhance it. Therefore, another person's (supervisor, as the third party) presence is to support both the interviewer and interviewee if necessary because the research topic touched on emotional issues such as death of loved ones.

After the interviews, the participants would be offered the option of listening to their responses. This is in accordance with McGrath et al. (2019), who suggested that participants should be offered the opportunity to listen to the recording of their interviews in case they would like to adjust anything. As observed by Taherdoost (2022), interviewers must acknowledge participants' cues, especially when addressing emotional topics since behavioural cues are means of communication. Non-verbal communications give an insight into how the participant feels about what is narrated (Wanko Keutchafo et al., 2022) for better understanding. In this study, non-verbal communication, non-verbal cues, and non-verbal behaviours are taken to mean the same. The non-verbal cues/communication or

behaviour and other expressions during the interview such as silences and pauses are as important as the spoken words (Foucault Welles et al., 2022).

As there is no single method of coding non-verbal behaviours during interviews (Blanch-Hartigan et al., 2018), observations will be written concerning participants' behaviours and facial expressions. Another reason for taking handwritten notes despite the electronic recording of the interviews is that these notes provide a backup to electronic data being collected in case of mechanical fault in the electronic recording devices and/or the transcribed data. The interviews will be electronically transcribed verbatim through a process which included listening to the interviews, including notes from non-verbal cues, writing draft copies, proofreading, and refining the responses. Transcription according to Oliver et al.,(2005) can follow either a naturalism or de-naturalism mode. As the onus of what to include or exclude in the transcription process depends on the interviewer (McMullin, 2023), consideration is made between the naturalism and de-naturalism methods of transcription. A naturalism mode of transmission will be utilised in interviews and considers all cues, pauses, and words that participants say/make. In other words, it is a verbatim transcription of the participant words and cues (Oliver et al., 2005), which will be adopted in this study.

Data analysis for text-based data

This section describes the approaches in analysing of both text-based data, which are the words that shall be spoken or written by the participants. Analyses of data from the survey will include descriptive and comparative analyses considering the demographic variables of participants, such as age, gender, and socioeconomic status. Data from such assessments aid in age adjustments and responses to constituents of the questionnaire, such as psychosocial distress, trauma history, social support, coping strategy and life satisfaction questions. Descriptive analysis will include central values, such as means, standard deviations, and percentages. The Excel analysis tool PAK and Statistical Package for the Social Sciences (SPSS) will also be used. Table 1 shows how the questionnaire items match specific research questions and study designs. The data in the qualitative component of the survey will be analysed according to Yin's five stages of qualitative data analysis (Fig 8).

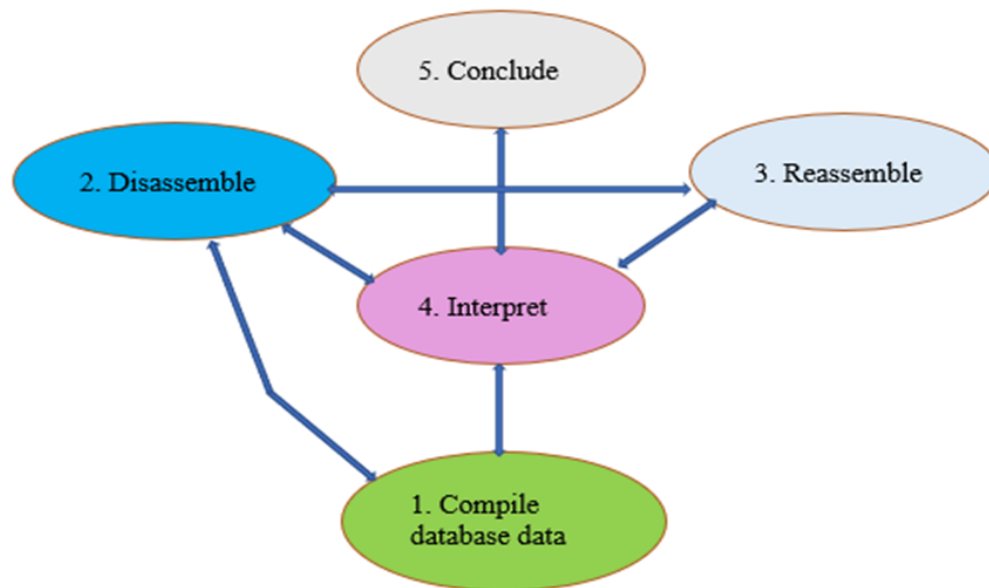


Fig 8 Five stages of qualitative data analysis (Yin, 2016 p186)

Following the interviews, the recordings will be listened to and the notes made during the interviews reviewed before transcribing. Taking notes during interviews is important, according to Muswazi & Nhamo (2013) 'note taking is the strategic selection of information that can be used to remember the scenario existing at the time in question'. The rationale for taking notes is that notes will give the opportunity to have hard copies of salient points in the participants' interviews that can be referred to.

As McGrath et al. (2019) state, it is important to convert the spoken words into a written record as soon as possible to ensure accuracy. Verbatim data transcription therefore will commence immediately with the aid of a computerised voice transcription. This action allows immersion in the data to enhance understanding of the contents. The data will be scrutinised further, and a computer-based word cloud generated to aid the data analysis. Further this also helps interpretation by producing a graphical depiction of the patterns of words and their frequency and is the 4th stage of data analysis according to Yin (2016, p186). Themes will be identified and notes taken, as per Yin's study (2012). Themes will be further examined to identify commonalities in content (Fig 9).

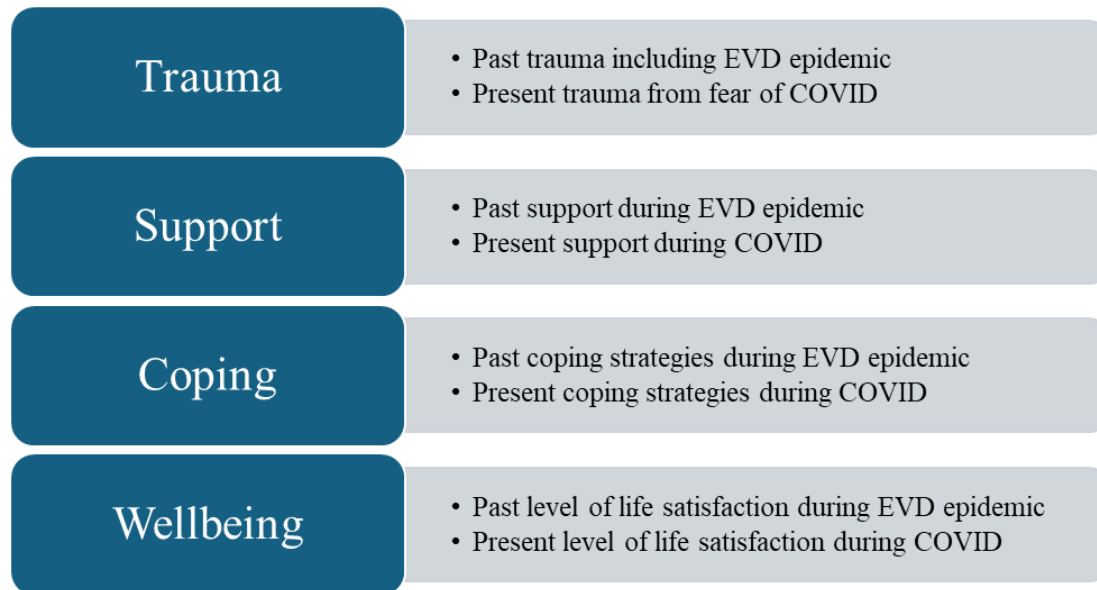


Fig 9: A summary of themes from qualitative data

Reliability and validity of the study

Ensuring rigour of the survey analysis

It is known that although surveys offer the opportunity to collect a large amount of data, there are concerns about their validity (Ingham-Broomfield, 2015). However, Claydon (2015) maintains that using an assessment tool that ensures rigour in a study enhances its credibility, validity, and generalisability. Therefore, the following terms and terminology are discussed.

Ensuring reliability and validity

Researchers have associated research rigour with selecting a suitable research topic, focused research questions, research design, and an appropriate research method for investigating the phenomenon (Johnson et al., 2020; McAlister, 2016). This research project seeking to assess the “*psychosocial impacts of COVID-19 pandemic among West Africans who previously experienced the 2014-2016 Ebola epidemic*” is a topic that requires appropriate questions that can be answered using validated methodological tools; and which underpins the designs. Research validity includes steps the researcher takes to measure the research concepts accurately (Heale & Twycross, 2015). These steps include ensuring, construct and internal validity, which will be maintained in the study. The research will ensure that data is correct or reasonable by safeguarding sampling procedures are appropriate and statistical tests and reliable measurement procedures are undertaken.

Statistical conclusion validity

The primary objective of research is to report credible research findings so that they can guide specific interventions. This depends on utilising statistical methods to analyse the research data and produce correct results. Such steps include the utilisation of statistical tools that help in finding answers to the research questions. Correct application of statistics and statistical procedures is essential for statistical conclusion validity (Grigsby &

McLawnhorn,2019; Levine, 2011). Statistical conclusion validity assesses the degree to which conclusions on the relationships among variables exist.

Construct validity

Construct validity refers to the extent to which an instrument measures what it purports to in a research (Bhandari, 2023; Stone, 2019). In other words, construct validity describes the validity of tools in relation to what they observe and measure (Cherryholmes,1988; Flake et al., 2022) and it is significant in determining the overall validity of the study. This represented how well scores on the instrument used in this study indicated the theoretical construct (Heale & Twycross, 2015).

Internal validity

Internal validity determines the extent to which a study establishes a trustworthy cause effect relationship, which makes it possible to eliminate alternative explanations for its finding (Heale & Twycross, 2015). Internal validity is demonstrated by the evidence of the research design to support claims of observations during the research process (Patino & Ferreira, 2018). Moreover, internal validity is demonstrated when the research can provide evidence to support claims made in the study. For example, internal validity will be demonstrated in this research by relating participants' e.g., fears or lack of fear during COVID-19 pandemic to experience with from the 2014–16 EVD epidemic and the psychosocial impacts they experienced. This is evidenced in a study 'Unravelling the effects of the Ebola experience on behaviour choices during COVID-19 in Liberia' by Skrip et al., (2024), which observed that people who experienced the 2014-16 EVD epidemic were likely to take precaution during the COVID-19 pandemic.

External validity

External validity on the contrary refers to the generalisability of research findings to similar situations and broader contexts (Hanasono, 2017). It considers the sample size of the study to ensure adequacy (Andrade, 2018). Thus, external validity will be demonstrated by the sample size for the survey and interviews. This study will focus on maintaining statistical, construct, internal validity and to minimise the effects of participants' and my bias in this inquiry.

Ethical Considerations

4 Ethics approval

Approval from the Human Research Ethics Committee (HREC) at the Charles Sturt University (CSU) (Protocol number: H20325) has been obtained. Since this is an online survey, completing and submitting the responses constitutes imply consent. However, cognizance is that this project is on psychosocial i.e. mental health impact. Therefore, elaborate attention will be made to ensure informed consent and trustworthiness of the qualitative component of the study (credibility, transferability, dependability, confirmability, beneficence, respect for participants and justice) as well as research reflexivity – as described below.

Ensuring informed consent

The survey is preceded by participants' information and consent forms respectively. The participants' information has precise and detailed information about the research. It also inclusive of the place where the research is undertaken, that is Victoria, Australia, a description of who can participate in the research, what the research involved, the expected time to complete the survey, outlined risks and benefits of participating in the survey, and the contact details of social support services in case they were needed. Furthermore, information about how participants' privacy will be protected, how the collected data will be utilised, what the participants needed to do to participate in the research and contact details of the researcher including all three supervisors and the Governance officer of the Human Research Ethics Committee of the Charles Sturt University were provided. The reason for this provision is that in case the participants were not satisfied with anything in the research, they could easily report the matter to whoever the participants are comfortable with to seek appropriate redress.

Ensuring trustworthiness of the qualitative component of the study:

Ensuring the trustworthiness of the qualitative descriptive study is significant in achieving credibility and reliability of the findings (Ahmed, 2024). The quality of qualitative research rests on how rigorously and methodically the study is executed. Rigour is a crucial concept in research that helps establish a study's confidence. It encourages consistency of procedure in the research process especially when exploring a complex social phenomenon. According to Ahmed (2024), trustworthiness in qualitative research rests on the following interrelated points elements: credibility, transferability, dependability and confirmability, which are discussed below.

Credibility: Since credibility asks how congruent the findings are with reality (Stahl & King, 2020), the concept of credibility enables the researcher to recognise a research problem. Also, to enhance credibility, the interview transcripts will be scrutinized the supervisors, to identify similarities in the data collected.

Transferability: Transferability is synonymous with external validity in quantitative research. The term refers to the degree to which a qualitative researcher explains the steps and processes involved in arriving at the finding, in case other researchers will like to replicate the study in a similar population and receive similar result (Ahmed, 2024; Riaz et al., 2023). According to what is known (Korstjens & Moser, 2018), a comprehensive description of participant's demographic characteristics and study setting is significant in achieving transferability. Elements of transferability in this qualitative research are comprehensive description of participants' demographic characteristics which includes age, occupation, marital status, and their origins, which are described in detail in the survey questionnaire. The study settings which is Victoria, Australia is described earlier. In transferability, the researcher reassesses and determines how transferrable or applicable the results would be in other settings or on the same cohort (Ahmed, 2024; Forero et al., 2018). In this study, transferability is considered possible at both national and international levels. This is because the West African emigrants who experienced the EVD epidemic are dispersed all over the globe.

Dependability: Dependability is how replicable a qualitative study is by utilising the same research methods. This process is facilitated in this study by effectively and rigorously

executing step-by-step documentation of the processes and stages of investigation. In other words, this process describes how the qualitative data in this study is collected and interpreted so that other researchers can replicate and attain similar results. Triangulation according to Carter et al. (2014) 'is a qualitative research strategy to test validity through the convergence of information from different sources'. Dependability is ensured through triangulation of the research process as illustrated in the next section. Another mode of ensuring dependability in this study is to 'identify words and phrases similar in meaning to generate themes. Further both text- based and interview data will be coded and amalgamated to provide subthemes and major themes for enriched interpretation and understanding.

Confirmability: Confirmability seeks to prove that the findings in the research are a product of the data from the participant, not the researcher. In other words, confirmability dwells on the researcher's objectivity in determining how close a research result can be (Nyirenda et al., 2020). One way confirmability is achieved in this study is through triangulation while giving reasons for preferring one research method for investigating the research phenomenon over others (Shenton, 2004), as is shown in the utilised mixed methods.

Methodical coherence: Methodical coherence describes how the study paradigm is understood and how the research methods are followed (Davis, 2012). Thus, following a specific research approach, adhering to methods of sampling data collection and demonstrating that trustworthiness and rigour have been maintained throughout the research (Davis, 2012) confirms methodical coherence.

Respect for participants: Participants will be fully informed about the nature and purpose of the research, which includes the potential benefits to the Australian migrant community and policymakers. The importance of maintaining autonomy wherein the participant is free to make decisions such as not participating or continuing to participate in the research without penalty is emphasized.

Beneficence: This principle covers two aspects of human research: (a) no harm or discomfort should occur to the participant, and (b) participants should not be exploited. Participants in this study will be fully informed on potential discomforts, such as awakening the sad thoughts of lost siblings and relations during the 2014–16 EVD epidemic in West Africa that might arise in interviews; and steps are taken to mitigate this threat. These include providing contact details of Melbourne's psychosocial support organisations and services. Similarly, in case of participants being unhappy with any aspect in the research process, contacts to report are on the participants' information sheet.

Justice: All participants will be treated fairly by providing valuable information in the participants' information sheet to make informed decisions on participating in this research and that their privacy and confidentiality will be maintained. Survey data will be collected by SPAN at CSU and the process is entirely voluntary, i.e., participants will voluntarily opt to give interviews. All data is kept in utmost safety on a secured server as outlined in the data management plan.

Researcher reflexivity

This aspect of the research according to Jamieson et al. (2023) focuses on how the researcher reflects on who they are as researchers, their beliefs and systems of judgement, which includes how critically they as researchers think that might affect the research process. The researcher lived the experiences that is, the 2014–16 EVD epidemic in West Africa and COVID-19 pandemic in Australia and this helps to positively reflect on perceptions and views, which will contribute not only to the qualitative component of this research, but also in interpretation of the quantitative data analysis. The reflexivity experiences allow the researcher to value the participants' lived experienced in the process, which will contribute immensely to the quality of data that participants will provide.

Conclusion

- 5 This paper has explained the research methods in detail so that the study can be replicated. It includes a discussion of the study designs, methods of data collection and analysis and ethical considerations observed in ascertaining the psychosocial impact of the COVID-19 pandemic on Australian-based West Africans who experienced the 2014–16 EVD epidemic.

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