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Article

Psychosocial and Economic Risks of Institutional Quarantine in a Low-Resource Setting: Experiences of Affected Persons during the COVID-19 Pandemic in Uganda

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Abstract: Institutional quarantine was one of the key public health measures used to control the spread of the Corona Virus Disease 2019 (COVID-19). Institutional quarantine has been associated with several psychosocial and economic risks. However, little is known about the psychosocial and economic risks it poses to affected persons in low-resource countries since it is a relatively new strategy for controlling disease spread in these settings. This article provides insights into the economic and psychosocial risks encountered by affected persons in a low-resource context. Narrative interviews were conducted with 20 adults placed under institutional quarantine to contain the COVID-19 pandemic in Uganda. Individuals confined in institutional quarantine experienced an intricate range of economic and psychosocial risks including loss of livelihood and/or income, financial distress, fear, worry, anger, loneliness, and stigma. The experience of specific risks was shaped by an intersection between individual and contextual factors. However, disregard for economic and social issues and shortcomings in the implementation of institutional quarantine contributed profoundly to the occurrence of risks. Safety nets to address the emergent financial insecurities of quarantined individuals and their families and bridging gaps in the implementation of institutional quarantine may help to minimise the associated economic and psychosocial risks in Uganda and similar contexts.

Keywords: COVID-19; economic risks; institutional quarantine; narrative interviews; psychosocial risks; qualitative research; quarantine; Uganda

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1. Introduction

Following the World Health Organisation's (WHO) declaration of the coronavirus disease 2019 (COVID-19) pandemic [1], there were calls for countries all over the world to implement measures to control and stop the disease. The diverse measures included travel restrictions, border control measures, lockdowns, restrictions on mass gatherings, social distancing guidelines, contact tracing and testing, school closures, hand washing, use of face masks and personal protection equipment among health workers, and isolation and quarantine of confirmed cases and close contacts [2–5]. This resulted in the use of institutional quarantine on an unprecedented large scale [6,7]. Defined as the restriction of persons who are presumed to have been exposed to a contagious disease but are not ill [8], quarantine was widely used as a key public health measure to control the spread of COVID-19 worldwide [6,9,10]. Globally, several countries introduced and enforced mandatory self and institutional quarantine for travellers from countries with community transmission and contacts of known cases [6,11]. Affected individuals were typically

subjected to self-quarantine at home or other accommodations or institutional quarantine at facilities designated by the responsible government authority [11]. Wherever used, quarantine was intended to facilitate early detection of cases and prevent the spread of COVID-19 in communities [12].

Uganda confirmed her first case of COVID-19 on 21 March 2020 in Ugandans travelling from Europe and the United Arab Emirates [13]. Several of them were subjected to mandatory 14-day self or institutional quarantine depending on whether they were returning or travelling from 'Category 1' (high transmission rates), 'Category 2' (moderate transmission rates), and 'Category 3' (low transmission rates) countries [14]. By April 2020, Uganda had placed a total of 2661 COVID-19 suspects under self and institutional quarantine [13].

Previous research shows that quarantine measures are highly effective in controlling the spread of COVID-19 and other infectious diseases [15–19]. For instance, mathematical models to evaluate the impact of stay-at-home and quarantine measures on the spread of COVID-19 in four cities with large outbreaks, including Wuhan, New York, Milan, and London, found that the two measures helped to contain the cumulative number of infections within 40 days [10].

However, quarantine is associated with a plethora of social, economic, and psychological risks to the affected individuals. A review of evidence on the psychological impact of quarantine prior to the COVID-19 pandemic identified mainly negative effects [20]. These included post-traumatic stress symptoms, depressive symptoms, anxiety, detachment from others due to avoidance behaviours, irritability, anger, fear, sadness, guilt, grief and anxiety-induced insomnia [20,21]. Brooks and colleagues [20] concluded that quarantine, particularly for long periods (more than 10 days), can cause high levels of psychological distress. A study comparing post-traumatic stress symptoms in parents and children quarantined and those not quarantined found that mean post-traumatic stress scores were four times higher in children who were quarantined than those who were not quarantined [22]. Similarly, a study on the psychological impact of COVID-19-related quarantine on children and adolescents in India found that children placed under home and institutional quarantine experienced significantly higher levels of psychological problems, including fear, worry, and helplessness, compared with their peers who had not been quarantined [9]. In Qatar, Reagu and colleagues [7] found high levels of depressive and anxiety symptoms among individuals quarantined in state-managed isolation centres. A similar study conducted among migrant returnees in Ethiopia reported a high prevalence of anxiety, depression, and stress symptoms among quarantined individuals [23]. In Canada, Daly and colleagues [24] found that quarantine, for whatever reason, was associated with increased odds of experiencing suicidal ideation and self-harm.

In Uganda, a qualitative inquiry into the experiences of individuals subjected to mandatory institutional quarantine in response to COVID-19 found that they faced several negative consequences including financial distress, uncertainty, anger, fear of infection with COVID-19, and worry associated with anticipated stigma from their communities [25]. However, this study was limited to the quarantine period and did not explore post-quarantine experiences. The study population comprised international travellers from a high socio-economic echelon and did not capture experiences of the informal sector and low-income earners. Moreover, it relied on quick telephone interviews.

Institutional quarantine is a relatively new strategy for controlling disease spread in Uganda and other low-resource countries. Therefore, little is known about the psychosocial and economic risks posed by institutional quarantine to affected persons in these settings. Indeed, extant studies have been mainly conducted in high-income countries [21,26]. The few studies conducted in low- and middle-income countries have primarily focused on psychological risks [23,27–31].

Moreover, these studies focus on experiences during the quarantine period, without attention to the quarantine intake processes or the period after confinement. The experiences of affected individuals across the quarantine phases including intake, during, and

in the aftermath of confinement need to be understood for effective design and management of quarantine interventions. This article contributes to knowledge of risks across the different phases of institutional quarantine. Knowledge of the risks across the quarantine spectrum is relevant to public health officials, social workers, and other helping professionals. It provides them with an understanding of the full range of individuals' experiences of quarantine, which can help to improve the design of future institutional quarantine interventions and better support affected persons.

This article draws on the lived experiences of people placed in institutional quarantine during the COVID-19 pandemic in Uganda to provide insights into the economic and psychosocial risks faced in the process of being quarantined as well as during and after confinement. In the context of this article, economic risks are defined as negative effects on the income, resources, and livelihood of quarantined individuals, while psychosocial risks are conceived as an interplay among negative effects on the mental (cognitive processes such as thoughts), emotional (feelings), and social (relationships) wellbeing of quarantined individuals.

Our findings highlight resources and support systems that need to be instituted to ensure the health, proper social functioning, and wellbeing of people placed in institutional quarantine in a low-resource context, in the event of new outbreaks of COVID-19 or similar epidemics/pandemics in the future. This information may help to improve the design, organisation, and appropriateness of institutional quarantine in Uganda and similar settings.

Quarantine and the Control of Infectious Diseases in Uganda

Quarantine has been used for many centuries as a strategy to control epidemic diseases that threaten to spread nationally or internationally. The use of quarantine dates back to the plague pandemic in Italy during the 14th century [8,32]. Since then, quarantine has been used to control the spread of other public health crises including the Bubonic plague in England in the 17th century, severe acute respiratory syndrome (SARS) outbreaks in Canada and China in 2003, an incidence of the bubonic plague in Yumen, China, in 2014 and the Ebola virus disease (EVD) in Guinea, Liberia, and Sierra Leone in 2014–2015 [8,18,32,33]. In all these cases, persons suspected of being exposed to the respective contagious diseases but not showing symptoms were separated for observation during a period of time. This practice of segregating persons who were exposed but not ill distinguishes quarantine from isolation, which involves the removal of people with symptoms of contagious diseases from the general public [8]. Quarantine may be voluntary or mandatory. It is typically applied at the individual, group or community level and usually involves restriction to the home or designated facility [8].

In Uganda, quarantine was serially used as a strategy to control the spread of EVD outbreaks in 2000, 2014, 2017, and 2018 [34] and more recently in September 2022 [35]. Quarantine to control EVD in Uganda was primarily applied at the community level to restrict the movements of people in affected geographic areas, in addition to the segregation of infected persons and their contacts in designated isolation and treatment centres [36]. In Uganda, mandatory institutional quarantine is a relatively new strategy initiated to contain the novel COVID-19 virus.

As previously indicated, Uganda imposed mandatory institutional quarantine on all people travelling into the country from Category 1 (with high transmission of COVID-19) countries and contacts of infected individuals [37]. These individuals were quarantined in hotels and hostels at institutions in major towns, such as Kampala City, and land and water entry border points for at least 14 days. Some of the quarantine centres were private, requiring individuals to cover their costs, while others were public and run by the government [25]. The unprecedented use of institutional quarantine to control the spread of the highly infectious COVID-19 virus arguably provided room for knee-jerk responses, which could have compounded economic and psychosocial risks.

2. Materials and Methods

2.1. Study Design, Setting, and Population

Thise article draws on data from a study that sought to examine resilience during and after quarantine among persons subjected to mandatory institutional quarantine to control the spread of COVID-19 in Uganda. An exploratory design was used to enable the study of individuals based on their unique experiences rather than the extraction of generalisable conclusions. Based on an interpretivist epistemological position and constructivism ontology, a qualitative approach was used to obtain in-depth accounts of participants' personal and diverse experiences of quarantine. This provided insights into the psychological, social, and economic risks they encountered during quarantine.

This study focused on people within Kampala City and the surrounding districts of Wakiso and Mukono. All three districts are located within the central region of Uganda. Kampala is the capital city of Uganda, while Mukono and Wakiso are part of the Greater Kampala and Metropolitan Area. Kampala and Wakiso are the most populous districts in the country- with, each hosting close to 2 million people. Regarding population size, Mukono ranks 7th in the country with a population of 596,804 people [38]. Kampala and its surrounding districts were the epicentre of the COVID-19 pandemic. Therefore, all three districts had several gazetted private and public quarantine centres. It was anticipated that focusing on these three districts would provide us with a wide range of cases with diverse experiences.

The study population constituted adults aged 18 years and above (both female and male) who underwent mandatory institutional quarantine either due to travelling from countries categorised as "high risk" or as contacts of persons infected with COVID-19.

2.2. Sampling

A total of 20 participants were purposively selected for this study. Drawing on the findings of Guest and colleagues [39], it was considered that a sample of 20 participants would be sufficient to attain data saturation. The purposive sampling technique was used because it allows for the selection of information-rich cases. In this case, it enabled the identification and selection of typical cases of people with a lived experience of institutional quarantine in the context of the COVID-19 pandemic in Uganda [40,41]. The selection criterion was maximum variation in terms of gender, age, reason for quarantine (traveller or contact), and place of quarantine (public or private). This selection criterion enabled the study team to gain insight into the diverse experiences of people placed under institutional quarantine during the COVID-19 pandemic [40]. Eligible participants were identified from lists of quarantined persons obtained from the Uganda Ministry of Health, who were then contacted for interviews.

2.3. Data Collection

Face-to-face narrative interviews (NIs) were held with each of the selected 20 participants. Narratives enable participants to "reconstruct social events from their perspective as directly as possible" [42]. In this case, they helped to generate situated data about the participants' experiences of institutional quarantine and the meanings they attached to them. Specifically, the interviews provided deep insights into the social, economic, and psychological risks encountered during and after quarantine from the perspective of the participants. A narrative guide with a list of issues to be explored was used to ensure that the participants were provided adequate time to tell their stories on their own terms. To eliminate possible risks for bias, participants were informed that no direct benefits would accrue from their engagement in the study. The interviews explored the participants' experiences as they were being placed in quarantine, during confinement, and after they were released. This study also explored the social, psychological, and economic risks encountered by participants in each of the phases of their quarantine journey. The interviews lasted between 1.5 and 2 hours and were conducted by a team of experienced qualitative researchers. The interviews were conducted in either English or Luganda, depending on

the proficiency and preference of each participant. Luganda is the dominant language in the central region of Uganda, while English is the official language and is widely spoken throughout the country. Narrative interviews are acknowledged as a suitable method for explorative research where an in-depth understanding of experience is sought [43].

In addition, we conducted a review of relevant documents including reports, institutional quarantine guidelines, presidential and ministerial statements, and standard operating procedures (SOPs) to understand the context and management of quarantine during the COVID-19 pandemic. A document review checklist was compiled to guide the process. Information obtained from these sources was helpful in triangulating data obtained from participant interviews. It was specifically vital in understanding and explaining participants' experiences and perspectives and further helped us to compare policy and practice in the management of institutional quarantine.

Data were collected between January and May 2022. During this period, COVID-19 was no longer considered a serious threat in Uganda, and so it was possible to hold face-to-face interviews with participants. However, the research team was advised to observe COVID-19 prevention SOPs such as wearing face masks, sanitising, and keeping a physical distance of at least 2 m.

2.4. Data Management and Analysis

All the interviews were audio recorded. The interviews were transcribed verbatim, translated into English (where applicable), and then word-processed. Two members of the study team who are proficient in Luganda compared the transcripts with the original audio interviews to ensure consistency in the translations. The processed data were then imported into NVIvo.12 qualitative data analysis software packages for further management. Data analysis was conducted thematically considering the steps provided by Braun and Clarke [44]. The process involved reading transcripts of data on each participant several times while coding the relevant sections, paragraphs, and words according to categories and themes emerging from the data or those identified from the study objectives. This article draws on data from the broad theme of risks due to quarantine and three sub-themes: social, psychological, and economic risks. In the process of data analysis, several intersections between the social and psychological risks experienced by participants were observed. For instance, it was observed that some of the fear experienced by participants related to their social relationships, while others worried about the wellbeing of their families due to their social positions. Moreover, social risks such as stigma often triggered psychological adversities such as anger and sadness. Consequently, data on social and psychological risks were collapsed into a broad sub-theme—psychosocial risks—to inform the content of this article. See Figure 1 for details of the themes and categories.

Figure 1 shows that people placed under institutional quarantine faced both economic and psychosocial risks. The main economic risks included financial distress and loss of livelihood and/or income. These economic risks contributed to the psychosocial distress experienced by the study participants. The psychosocial risks constituted interactions between psychological and social risks including anger, fear, worry, frustration, mental distress, loneliness, and suicidal ideation and stigma, strained relationships, and social isolation, respectively.

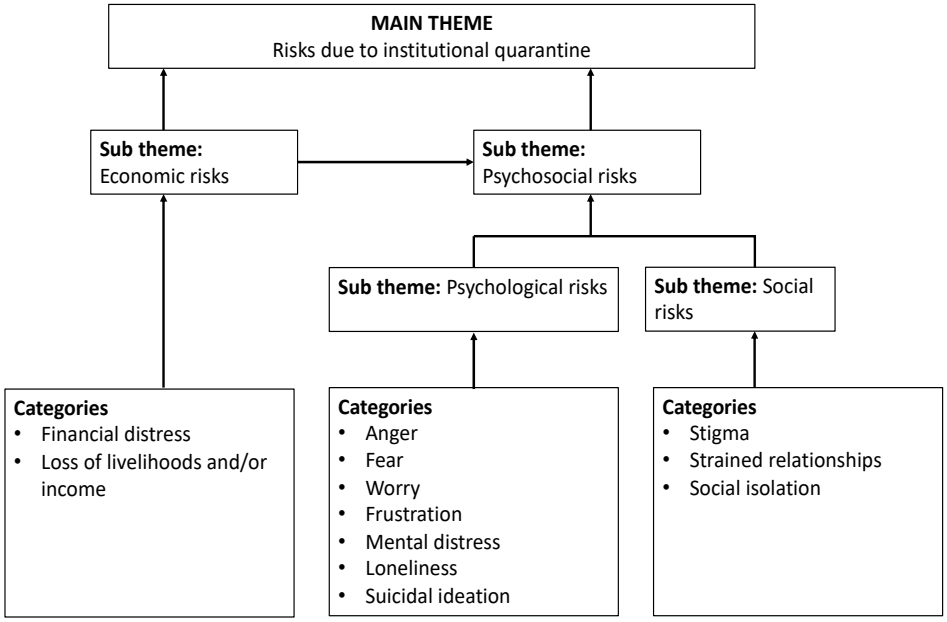

Figure 1. Themes and categories.

2.5. Ethical Considerations

Ethical approval was obtained from the Makerere University School of Social Sciences Research and Ethics Committee (MAKSSREC 07.21.479) and the Uganda National Council for Science & Technology (SS1047ES) before this study was conducted. Written informed consent was obtained from all the participants. Participants were informed about the study purpose, potential benefits and risks, and their right to voluntarily participate and to withdraw from the interview at any point. The participants were also assured of confidentiality and informed of the measures undertaken to ensure the realisation of this right. To maintain confidentiality and protect the privacy of participants, interview transcripts were stored on computers with passwords to restrict access to only the members of our research team. The audio interviews were destroyed after transcription. Each participant was assigned a pseudonym during transcription. Only the assigned pseudonyms are used in this article. In addition, potentially identifying information has been omitted from the data presented in this article. To protect the participants from possible infection with COVID-19, there was strict observation of social distancing guidelines in the data collection process. The research team was equipped with face masks and sanitiser and informed of COVID-19 prevention SOPs from the Uganda Ministry of Health.

3. Results

3.1. Characteristics of Study Participants

Most (11) of the participants identified as female. More than half (twelve) of the participants were in some form of union (married/cohabiting), while 5 were single and 3 were either divorced or separated. Their age ranged from 23 to 50 years. In terms of occupation at the time of the interview, most (eight) derived a livelihood from informal sector trades, followed by seven who were formally employed, one who was a student, and four who were unemployed. Nine of the participants had been quarantined in private facilities, with the majority (eleven) opting for public institutions. Most (twelve) of the participants were quarantined because they were travelling from high-risk countries, while the rest were contacts of confirmed cases. Only three participants developed symptoms of COVID-19 while in institutional quarantine. See Table 1.

Table 1. Characteristics of the participants in this study.

Characteristic	Frequency (N = 20)	Percentage (%)
Gender		
Female	11	55.0
Male	9	45.0
Marital status		
Single	5	25.0
Married/cohabiting	12	60.0
Divorced/separated	3	15.0
Age (years)		
20–29	7	35.0
30–39	9	45.0
40–49	3	15.0
50	1	5.0
Main occupation		
Informal sector trade	8	40.0
Formal employment	7	35.0
Student	1	5.0
Unemployed	4	20.0
Quarantine facility type		
Private	9	45.0
Public	11	55.0
Reason for quarantine		
Travel	12	60.0
Contact	8	40.0
COVID-19 status during quarantine		
Positive	3	15.0
Negative	17	85.0

The subsequent sections present the economic and psychosocial risks encountered by the participants in this study during the process of being placed in institutional quarantine and during and after release from confinement. It should be noted that the different categories of risks are not mutually exclusive. Rather, there are intersections, for instance where economic risks were triggers for psychosocial risks.

3.2. Economic Risks Associated with Institutional Quarantine

Data identify two major economic risks encountered by participants due to mandatory institutional quarantine: loss of livelihood and/or income and financial distress.

3.2.1. Loss of Livelihood and/or Income

Some participants reported losing their major sources of livelihood, as their enterprises inevitably closed down when they were put under institutional quarantine. This risk primarily affected people employed in the informal sector. In Uganda and similar sub-Saharan African countries, the informal sector mainly constitutes micro and small enterprises operated by self or unpaid labour. In this regard, it was difficult for the enterprises to continue running when the owners were placed under quarantine. Moreover, the typical low profit margins of informal sector trades in this context meant that actors had to rely on daily sales to make ends meet [45], which complicated their livelihood.. When asked about how quarantine affected him, Grace lamented about the loss of his business and income after close contact with a workmate who was confirmed to be suffering from COVID-19 led to his confinement in a public facility in Kampala City. He remarked, "...it was depressing because I lost the business I had. I was operating a bar somewhere and it had to close. So, in terms of business and income I was really affected".

Similarly, Mulungi who ran a successful enterprise in South Sudan before the COVID-19 pandemic reported that his business did not survive. This was attributed to his unanticipated extended stay in Uganda, where he was quarantined twice, and consequently failed to return to South Sudan. He was first placed in institutional quarantine at a border town on his way from South Sudan to Uganda. Later, he was quarantined as a contact of a confirmed case while he queued to receive his COVID-19 test results from a prominent public hospital in Kampala. The two episodes of institutional quarantine not only delayed his return to South Sudan, leaving his business closed for a long time, but also increased the cost of the trip, as he had to sustain himself while not earning an income. He was eventually unable to return to South Sudan to restore his business because he had eaten into the capital.

> Okay I have been in 2 quarantine centres. The first was at Pabbo (a border town) when I was coming from [South] Sudan. The second, I was in . . .[Hospital] and they told us that we were in contact with a COVID-19 patient and the soldiers came and rounded us all up and took us in a quarantine centre. I had gone for my COVID-19 test but it ended up like that. The unplanned stay affected my business. I was not working or earning any money so the business closed. And I was not working in Uganda I was in South Sudan and they did not allow me to go back, until I finished the 28 days [14 in each round] of quarantine. I had come back home [here] for treatment as I was sick but I ended up in quarantine. You don't have to tell them about your sickness. 14 days you are in there. I ended up spending all my savings and could not go back to re-open the business. **(NI with 39-year-old male participant)**

Unlike Grace and Mulungi, Noah was an employee rather than a business owner. While he retained his job as a driver at a car importing company, he too was unable to earn income during his time in quarantine because he was receiving a wage. "I was really highly affected because given the kind of work I do, we work for daily survival and so not working during that [quarantine] period affected me," he explained.

In contrast, none of the participants in the formal sector reported losing a job or income during their time in quarantine. All of them reported that they continued to receive their salaries despite not being physically at work. Moreover, several of them reported being offered the opportunity to work remotely, which enabled them to continue executing their duties while in and after release from quarantine. For instance, John reported continuing to work remotely and receiving his salary during and after quarantine. He had returned home to Uganda from his duty station abroad to be with his family. He reported that travel was possible because his employers allowed him to work remotely from home.

> I was still working on different reports. I had access to internet so I continuously worked for those 14 days. So, I was still on my job in those 14 days. My employers allowed me to travel back home and stay with my family during the COVID-19 situation. Despite the fact that they didn't cater for my expenses [including quarantine] they permitted me to come and work from home. That was good enough. And my salary was paid I didn't get any reduction in my salary but an increment. **(NI with 39-year-old male participant)**

Essentially, institutional quarantine exacerbated the economic vulnerability of participants whose situation was already fragile.

3.2.2. "It Ate Deep into My Pocket": Financial Distress

Several participants reported experiencing financial distress while in quarantine. These participants were mostly quarantined in private facilities and had to cover subsistence costs including accommodation, meals, laundry, and transport fares upon release from quarantine on their own. This drained the resources of some of the participants to the extent of interfering with their scheduled activities. It did not help that some of them had not planned for the expenses and were desperate to return home. This was particularly the case

for participants who returned shortly after the Uganda government declared quarantine for travellers and returning residents at their own cost. At the time, the government of Uganda was yet to provide free institutional quarantine services, so affected individuals had to rely on personal resources. Moreover, the expenses were often much higher than expected, mainly due to extended durations of quarantine—in some cases under unclear circumstances—and/or exorbitant charges from service providers. Furthermore, the options were limited, so these participants had to take what was on offer. An example was Agaba, who was quarantined in a guest house in one of the border towns on his return from studies abroad. He explained that he had been offered only limited options for pay, and despite choosing the cheapest accommodation on the list, the costs drained his resources to the extent that he later struggled to provide for his family and return to his studies as planned.

> We spent a lot of money; it was over a million [Uganda Shillings] in just the 14 days I was in quarantine. That was substantial to me as a person with a family here and I am studying the other side. It was not so easy for me to spend all that money during those days. It was challenging and finally it constrained me and ate deep into my pocket. It even affected the time I had to go back for studies. **(NI, 38-year-old male participant)**

Agaba further described how the inflated transport costs amid the lockdown had complicated his return home upon his release from quarantine. He explained how the transporters charged him exorbitantly and that he had to request financial assistance from his wife to afford the fares.

> Yeah the 14 days we were like in prison but when they told us to leave after they had given us our results; they told us to look for our own means of transport. We used taxis from the border town to our homes. We filled it up and each person paid 45,000/= (USD 12.2). Imagine the normal rate is 15,000/= (USD 4.1) but we paid 45,000/=. But they helped me to reach home safely. We were like 6 people and that was how much? Like 300,000/= (USD 81.1), they really made money! And, by the way I had to ask my wife for support to be able to pay the fares. Time reached when I had only 100. . . shillings which was worth 10,000–17,000/= Uganda Shillings (USD 2.7–4.6). **(NI, 38-year-old male participant)**

Participants whose employers covered their costs during quarantine were also not exempted from spending. These were employed in the formal sector. Several of them reported incurring additional expenses to meet needs beyond the scope of the basic package—typically including accommodation and three meals a day—which was covered by their employers. Some of them had to meet the costs for extra days spent in quarantine, as their employers usually paid for only the 14 days officially communicated by the Ministry of Health. For example, Patrick reported spending on water, extra meals, and washing soap—because he had to do his laundry—which were outside the accommodation and three meals covered by his former employer. He had to return home to Uganda after being relieved of his duties because he was indisposed with COVID-19 for several months, so his former employers offered to cover his institutional quarantine costs.

> Yes, being a four-star hotel, it was a very expensive place to live in. I had not planned to spend any money in these 14 days over some few necessities because there are some things I could not afford at the hotel. So, I spent money buying the things from out. Because for instance, you may need tea around midday yet it was not included in the meals paid for by the company [my former employers]. Which means you had to spend your own money. They covered only breakfast, lunch and supper. Yet, I maybe in need of evening tea, a soda or water. So, I had to spend unplanned money. Even washing soap when needed you had to buy. They could not give it to us. . . Yes, you had to buy your own soap to do your laundry. **(NI with 38-year-old male participant)**

Similarly, William reported spending on additional meals to change the diet and ingredients to make concoctions for boosting his immunity against COVID-19, which his employer did not pay for.

> If you did not have money, you could not get what you wanted. Because there are some basic needs you would want to get like eating a different meal that you had to pay for. There was a routine meal and you felt like you wanted to change, maybe like breakfast, but you needed water to do your concoction to boost immunity. . . **(NI with 30-year-old male participant)**

Olivia had to personally pay for the extra three days she spent in institutional quarantine due to a mismatch between the officially communicated duration of institutional quarantine and practice. She reported that the Uganda Ministry of Health had consistently indicated the initial duration of institutional quarantine was 14 days starting from the time she applied to be repatriated back to Uganda, only to be told that she would spend 17 days under unclear circumstances while already in confinement. Her employer had already paid for 14 days prior to her travel, so she had to meet the additional costs on her own.

> I actually spent 17 days. . . That was the biggest challenge. When we were coming in they told us 14 days; after you have paid then they will tell you it will be 17 days and the hotel made me pay for the extra 3 days. One of the ladies from the ministry. . . came and I asked her why they had to increase the number of days. She told me that they have to do the last COVID-19 test on the last day of quarantine then it takes a day or 2 because it was not rapid because the incubation of the virus takes 14 days so they could not do it earlier. So, they do the last test on the 14th day. This didn't make sense to me but I had no choice. It was expensive, way over the budget, extremely expensive and the extra 3 days, it was really expensive. **(NI with 30-year-old female participant)**

Moreover, the risk of financial distress extended to some of the participants who were quarantined in public facilities. While public quarantine centres were established as an alternative for people who could not afford private arrangements, this study found that some of them fell short of providing sufficient and cost-free care for the residents. Although persons quarantined in public facilities were given basic necessities such as food, water, soap, utensils, beddings, and vitamin C supplements, among others, some participants reported having to spend their own money to adhere to dietary recommendations, entertain themselves, access basic meals, and pay for COVID-19 tests. For example, Pretty told of further draining her savings while purchasing data to entertain herself, complying with medical advice to eat fruits, and paying the required fees for COVID-19 tests she received while in quarantine. Upon her return to Uganda, after getting stuck in the European country she had travelled to for a short visit for eight months, Pretty opted for one of the public quarantine centres on the outskirts of Kampala City. While she had desired to stay in a private facility, the inflated fees charged for the options she was provided had disheartened her. She told of paying dearly to get home and how her fragile financial situation was compounded by the inevitable expenditure during quarantine.

> So, we were given two options to either quarantine in the hotels as listed below or you go to the government facilities. But I tell you the cheapest hotel on their list was 300,000/= (USD 81.1) per day minus meals. Remember you're to be there for fourteen days surviving. Now how much money is that really, on top of the air ticket? Remember this is an unexpected occurrence. For me I was desperate to find my children. I had left in the hope of returning to find them, but got stuck there for 8 months. They charged me an air ticket of 2.5 million at 5 million. I had other things I would have used my 5 million for because I had a return ticket already. We had to dig deep into our pockets to raise that money and remember lockdown was not only in Uganda. Even the other people abroad were not earning, so one had to survive on savings. Even the little savings that we had for our children's school fees were diverted for my return. I was already financially

> distressed so, I chose a government facility... They gave us the essentials; we were given meals, water, bar-soap, beddings... I had already overspent to return home. On top of that I am under quarantine and still spending. For example, if I needed something like fruits, I would provide for myself. Remember they were telling us to have vitamin C but we weren't only to get it from the tablet for some of us that have ulcers. We would be triggering them. So, you need the natural fruits like the watermelon to dilute the mango or pineapple that is going to bring acidity. But there was that expense of sustaining yourself without even first being sure that the government is going to release you after the 14days if you are not positive. There was no TV (television) or other form of entertainment. I spent a lot on [internet] data to entertain myself with the phone. We as well paid 150,000/= (USD 40.5) for the [COVID-19] tests. **(NI with 38-year-old female participant)**

Mulungi explained how inefficiencies in one of the public quarantine centres in which he was confined necessitated that they had to spend to survive. He told of how the cooks had laid down their tools on his first day of quarantine leaving them without any food. They had to dig deep into their pockets to eat.

> Hehe, it was a school with all unslashed grass around; we slept in class rooms. Good we had mosquito nets and beddings but they were not washed. You had to take care of yourself and wash them. The day I went there the cooks had a strike and refused to cook. We stayed hungry until night. If you had some money you catered for yourself. **(NI with 39-year-old male participant)**

Similarly, Shamim explained how she spent on food and drinking water because the meals in the public facility in which she was quarantined were always served late, while the water was unsafe.

> It [the service] wasn't bad. Only that we were somehow inconvenienced with food because some of us had to buy our own food, reason being that the food was served late. We would get hungry and look for our own food. The drinking water was also not good, so we were forced to buy. **(NI with 26-year-old female participant)**

Very few participants reported not experiencing financial distress during institutional quarantine. Most of these participants were quarantined in public facilities that provided what they considered adequate care, including meals, medical care, and entertainment free of charge. They reported encountering no financial distress to provide for themselves during quarantine because they were given "everything". Some of them reported that they had wished for their stay in institutional quarantine to be extended indefinitely. Rhoda was quarantined in one of the public facilities as a contact after one of her workmates was diagnosed with COVID-19. While she was quarantined for a month because her stay was extended when positive cases were identified in her centre, she reported being unbothered by the extension because she was more comfortable in the centre, where she received free food, water, sanitary pads, soap, private accommodation, and medical care, than in her day-to-day life. She revealed that several people in her centre wished for their stay to be extended.

> We spent a month [in quarantine]. Yes, it was because whenever they would get someone who was infected from our group, they would extend the days in there. But this didn't stress me. I knew why I had come to quarantine. Then also they gave me everything I needed in there. So, life was good and beyond normal for me. They were very good, everything was very, very okay! They would give us meals and we would eat enough food. We ate three times a day; breakfast, lunch and supper. We could watch news on TV. And the whole environment was very okay as in clean; bathrooms and toilets, beddings were good, each had a room, to the point that some people never wanted the time for quarantine to end. **(NI with 23-year-old female participant)**

The few participants who were quarantined in private facilities and reported experiencing no financial distress had robust formal and informal safety nets from family, employers, and other institutions. An illustrative case was Charlotte, a Ph.D. student who was cushioned from financial distress by a combination of safety nets from her family, her employer, and her study sponsor. She reported that her quarantine costs were met by her sponsor, while her family provided her money to meet additional needs, even though she could not easily access the salary from her account. She noted that her employer had continued remitting her salary even while she was stuck abroad, where she had initially gone for a short stay of six weeks, for four months due to the lockdown and ban on air travel in Uganda. When asked if she encountered any economic constraints while in quarantine, Charlotte remarked:

> Not at all... I know there are people who probably used up their last saving and had to start from zero to collect money again. So, I know there are those people, but for me that wasn't really the case because even while I was abroad, I continued getting my monthly salary and also even when I came back. My [Ph.D. study] sponsor met the costs of quarantine, the meals and accommodation. Like I told you, my family gave me the money that I would spend, airtime as well as data. I had money but it was on the account and I couldn't go out to withdraw and so they sent me mobile money. That really helped me throughout quarantine. So, for me I did not get any economic constraints. **(NI with 29-year-old female participant)**

3.3. Psychosocial Risks

The participants in this study encountered several psychosocial risks in the process of entering quarantine as well as during and in the aftermath of their release from confinement. These included fear, anger, worry, frustration, loneliness, mental distress, suicidal ideation, stigma from close relations, social isolation, and strained relationships.

3.3.1. Fear

Participants reported experiencing various forms of fear in the process of being quarantined as well as during and after release from confinement. For some, the fear revolved around imminent death. This was particularly the case for those who eventually presented with symptoms of COVID-19 during quarantine as well as participants who felt that they were at an increased risk of death due to their advanced age. In most of the cases, the fear was exacerbated by the lack of psychosocial care services in the quarantine centres. Yet, several participants lacked adequate information on the epidemiology and prognosis of COVID-19. This study found that even though the guidelines for institutional quarantine provided by the Ministry of Health required that the support team attached to each centre had a psychosocial worker and counsellor [37], only a few facilities complied with these standards. Kasalina explained how information on the prevalence of and COVID-19-related deaths attenuated her hope for survival as well as exacerbated her physical symptoms when she presented with COVID-19 a few days into quarantine. She suggested that counselling and psychosocial support would have helped her to react more positively.

> Actually, people have died of COVID-19 but let me tell you, like how I felt while positive [for COVID-19]. Knowing I was sick wasn't the problem but seeing an advert was the problem. I would feel like my head wants to burst, like I'm dying any time. Anything I would see on television related to COVID-19, about the number of dead people, that would worry me a lot that I was also going to die anytime. People are lacking that counseling that it is not that whoever contracts COVID-19 is going to die. The situation I was in, my pressure rose to 150/100 and I got hypertensive. I even can't tell the pumping rate I had per minute. Let people know it is bad but take it well. We thought we were finished when we got COVID-19. **(NI with 33-year-old female participant)**

Participants who received regular counselling and information from health workers reported coping better, which underlines the importance of psychosocial support services for people in quarantine. Like Kasalina, Grace presented with symptoms of COVID-19 a few days into quarantine. While he also reported fearing for his life, given his advanced age, he observed that psychosocial support and timely information from health workers helped to allay his fears.

> Yeah being elderly like I told you my age I was worried, wondered if I will survive COVID-19. . . We had health workers they used to talk to us and counsel us to be calm and told us we shall heal and be okay. . . Yeah and the responses they gave us kept on calming us down and increasing our knowledge about COVID-19. **(NI with 50-year-old male participant)**

However, some of the participants who were gripped with fears of imminent death had not even confirmed their COVID-19 status. These were mainly participants who were quarantined on the premise of being contacts, as several of them were unaware of the rationale, processes, and procedures of institutional quarantine. Yet, there were hardly any professional measures to prepare them either in the process of being picked for or during quarantine. Consequently, several of them thought that they were already infected and going to die after being informed that they had been in contact with infected persons. Noah told of the intense fear that afflicted him when he realised that he was a contact of a confirmed COVID-19 case. He revealed that the news hit him so hard because, at the time, he thought that he was also infected and going to die; a belief that was compounded when he was confined in his quarantine room.

> It was around 2:00 p.m. So, they came to pick me and told me to follow them but no one was coming close to me. When I asked them what was going on, they just told me to continue walking. We reached a petrol station there were two police officers. They directed me to sit somewhere and also told me that I should not sit close to any person. So, after asking them a number of times to tell me what was going on, they told me that I was a contact of a person with COVID-19 and that is the man who had handed me the car. After telling me the news, they told me to relax but I was in fear and even got high blood pressure. . . What scared me is that during that period, we heard that whoever gets corona [COVID-19] has high chances of dying and so I thought I was going to die. Actually, during that period, I was coughing and sneezing all the time and it was sort of a confirmation to the COVID-19 task force that I was sick. So, they drove us to. . . up to where the. . . hotel is. When we arrived, some of the members on the COVID-19 task force were already there to receive us. We were each given our own room that only had a bed in it and when I entered there, I realised that my world had ended. I got scared and ended up crying. They had left us with our phones but I didn't even have the courage and strength to call anyone. . . **(NI with 48-year-old male participant)**

While Noah reported receiving no professional psychosocial help prior to and/or during quarantine, he indicated that he experienced some relief when the caretakers of the facility provided him with basic information about his situation as a contact and the procedures that would be followed in handling his case as well as further encouraging him to be strong.

> So, after one hour upon arrival at about 4:30 p.m., some people knocked on my door and when I opened, they gave me a mattress, bedsheets, a blanket and a carton of drinking water. They also tried to explain to me that we were not yet confirmed to be positive but rather, we are just suspects and so they were going to monitor us and see if we are safe from the virus or not. They told us not to worry because in case they found us healthy and free from COVID-19, we shall go back home and if we are infected, they will treat us and we shall be fine. So, they really encouraged us to be strong and also, my friend who I came with was in the next room. **(NI with 48-year-old male participant)**

Other participants feared contracting COVID-19 while in quarantine. Several of these were in centres where compliance with COVID-19 prevention SOPs was low. Agaba reported how he and others in his quarantine centre lived in constant fear of infection with COVID-19, partly due to limited compliance with SOPs by the facility.

> When we had just come, we were fearing, everyone was worried of corona (COVID-19). To make it worse, the guest house I was in didn't care about SOPs. We were like 8 people some of us from. . . and others from elsewhere. Apart from locking us inside, the rest of the SOPs were not followed. There was mixing up freely; it was like a bar. They did not allow any visitors. But if any of us had corona I don't know what would have happened we were all mixed up. We would watch the TV together in the small room. We would eat together on the food tables so there was no social distancing in there. **(NI with 34-year-old male participant)**

Nevertheless, some of the participants who were confined in facilities that enforced the SOPs also reported living in constant fear of becoming infected by new persons brought into their quarantine centres. For instance, Noah revealed that the sound and sight of an ambulance dropping new people for quarantine always triggered his fear of infection because he was not sure of their COVID-19 status. This was despite his facility enforcing social distancing guidelines. He revealed that they were not allowed to have any physical contact with others. Even though they were occasionally allowed to sunbathe in the compound, this only happened under the watchful eyes of security personnel to ensure that significant physical distance was maintained.

> You would be there in your room and you hear ambulance sirens and when you peep, you find that they have brought in new people which used to really scare us. I would keep telling my friend to keep himself safe because the people they have brought may be the sick ones [infected with the COVID-19] since for us we had already confirmed that we were negative. **(NI with 48-year-old male participant)**

Some participants harboured fears of being stigmatised by close relations upon their release from quarantine. Several of them knew of people who had been stigmatised when they returned home from quarantine. For instance, Charlotte indicated that her excitement to return home after quarantine was overshadowed by fears of anticipated stigma from close relations.

> As the last days of quarantine approached, I was excited to go home. The only problem was the fear of getting stigmatised. I thought people would stigmatise me or get scared to be with me. I had heard several stories of people coming from abroad being stigmatised when they returned home during the COVID-19 pandemic. **(NI with 29-year-old female participant)**

As shown, the participants in this study grappled with multiple fears during quarantine. Most of the fears stemmed from the novelty of COVID-19 and partly institutional quarantine.

3.3.2. Worry

The participants in this study worried about several issues while in and out of quarantine. While the worries were triggered by conditions in quarantine centres in some cases, in other cases, worries emanated from factors beyond the facility. For instance, some participants worried about how their loved ones at home were coping without them. Several of these participants were married males who were the sole breadwinners for their families. In the cultural context of the Baganda, the dominant ethnic group in the study area, provision for the household is primarily the responsibility of males. These participants were unable to make any alternative arrangements for the provision of their families due to the combative manner in which contacts were removed from the community. Noah shared how the security officers who picked him up from his home restrained him from

leaving his family money for subsistence even though there was a close family member in the small crowd of onlookers he could pass it to. He had to improvise for the money to reach his family.

> . . .So, after a few minutes of waiting at the petrol station, the ambulance came with men dressed in white and they were all covered up; there was no one whose face you could see. So, they wrote down our personal details like the names and they told us to enter the ambulance. By that time, many people including my uncle had gathered around the petrol station and they were observing what was going on. Since I was caught unawares, I had not left any money at home but I had 200,000 (USD 54) with me at that time. I could see my uncle from a far and I requested the police men to allow me give him the money to take to my family. Unfortunately, the police man just shouted at me and banged the ambulance door and locked me inside. I told him that my children didn't have anything to eat and the man warned me not to speak again. As the ambulance was almost setting off, I could see my uncle crying because I also cried. So, what I did, was to throw the money through the window and I screamed at my uncle to get it. When the ambulance was setting off, I saw the people at the petrol station sanitising it and since my uncle was nearby, I knew they would give it to him to take to my family. **(NI with 48-year-old male participant)**

Another example was Moses, who was also the sole breadwinner for his young family. He was removed and taken in quarantine from his workplace after being identified as a contact. Moses described how the quarantine team constituting unfriendly uniformed and plain-clothed security personnel ambushed and ordered him to go with them without any explanation as to why he was being taken. He explained how he was denied the opportunity to prepare for the departure, including storing his property.

> There is a certain company I work for that deals in importing and selling new cars. So, I am one of the employees that receive and inspect these cars to ensure they are in good condition. So, I went to pick a new truck and I brought it to the car bond. Shortly after parking the new truck, I went to have lunch and it was around that time that some people came asking about the car I had just brought in and the person that was driving it, which was me. In the team that came to question me, there was a police officer in uniform and another without a uniform, there was also the manager of the bond. So, they told me to first stand aside from everyone else and then asked me who I had gone with to pick the car. So, I told them that I was with a certain friend of mine and there was no one else besides the two of us. They then told me to follow them and I was really confused because I didn't know what was going on given the fact that we were in the COVID-19 period. There was a certain harsh man. I don't know if he was a police officer, but he was with the police officer although he wasn't in uniform. I requested them to allow me first keep my things somewhere before we go but they refused me to do so and I just kept on wondering what was happening. Up until now, they hadn't explained why and where they were taking me. So, I had keys with me that I really didn't want to move with and so I decided to throw them to my co-worker and as he was picking them, they told him not to touch the keys and I wondered if I had COVID-19 only because of that. . . **(NI with 31-year-old male participant)**

Although Moses appreciated the care he received while in quarantine, he reported being constantly worried about how his family would survive without him. He added that his wife exacerbated the situation by sobbing whenever he called her.

> However, we were treated well during quarantine because breakfast, lunch and supper were always served on time; we were mostly affected by the fact that we were not working and yet our families depended on us for survival. . . .The truth is that I got scared and worried about how my family would survive because

> my wife was pregnant. I was so terrified that I even begun crying; I was in a depressed state most of the time wondering how my family will survive and eventually, it is like I got fever because of over worrying about my family's survival... They [my family] really felt bad when I told them that I had been quarantined; especially my wife and parents. I actually think my wife cried for a full week because for all the times I spoke to her on phone, she was always crying; my mother was also crying... During that time, people had started dying and so it was tough for everyone. I always felt bad every time I called my wife and heard her cry. **(NI with 31-year-old male participant)**

Other participants worried about the additional expenses they would incur if their quarantine period was extended beyond 14 days. Patrick had returned to Uganda from Afghanistan, with the understanding that his former employers would cover the costs of mandatory institutional quarantine upon his arrival. It was agreed that he would quarantine in a specific multi-star hotel. However, the employer only committed to cover the costs for 14 days, and he was aware that his stay could be extended if a positive case was identified at the facility. Consequently, he constantly worried about how he would pay for the additional expenses at such an expensive facility in the event that he stayed longer than planned.

> Actually, what I was worried about was; what if someone [at the facility] tested positive and I am to stay here for another time after the 14 days. It was 7 or 14 days more. I was like, 'how will I manage staying here at this expensive 4-star hotel?' ...Yes, so I was worried about how I was going to manage the hotel bills because I had no money to sustain myself. **(NI with 35-year-old male participant)**

In addition, some participants reported worrying about the possibility of infecting their significant others following their release from quarantine. Several of these participants were released without receiving their final polymerase chain reaction (PCR) test results that should ideally have cleared them to return home. An example was Magara, who was quarantined at one of the private facilities in Kampala. He reported being emotionally distressed by the fact that he could infect others after being released from quarantine without receiving his final PCR results for several weeks.

> Yes, I became so emotional when these guys could not give me my PCR results in time because they knew this was mandatory for someone to leave freely and go interact with other people. But now you are letting someone without results leave the facility not knowing their status. They may infect other people. So, this thing worried and disturbed me because I would see the responsible people not concerned, not serious with what they are doing. **(NI with 38-year-old male participant)**

Moreover, even those who returned home with negative results were commonly not confident that they were free from COVID-19. One of the study participants, Agaba, attributed his fears to limited knowledge and, concomitantly, uncertainty about the disease at the time. When asked why he was anxious about possibly infecting his family with COVID-19 even though he was released with negative test results, he remarked:

> COVID-19 had just come and not very many people had knowledge about how it spreads and how to prevent it. I was worried that what if I actually had it, was I not going to pass it on to my children and other family members? Not very many people had it and they told us that all those people who had to be quarantined were not free of the disease. So, all those things would bring us the worries and fears. **(NI with 34-year-old male participant)**

In summary, the worries experienced by the participants in this study were not always triggered by events within the quarantine centre. Nevertheless, the bulk of them were

primarily rooted in institutional inefficiencies and inadequacies in the organisation and implementation of institutional quarantine.

3.3.3. Feelings of Anger and Frustration

Several participants reported experiencing feelings of anger and/or frustration at some point during their time in quarantine. For some, the anger was triggered by the belief that they had been wrongfully quarantined when there was no COVID-19. This conviction was partly drawn from popular belief that COVID-19 was a fallacy during the first and milder waves of the pandemic in Uganda and subsequently affirmed when participants observed laxity in the enforcement of SOPs in the quarantine centres. Mulungi reported feeling angry while in quarantine in both Kampala and a border town because he felt that he was being confined unjustifiably. He told of how COVID-19 SOPs like sanitising, wearing face masks, and physical distancing were flouted in public health facilities and the two quarantine centres, which affirmed his doubts about the existence of the disease.

> I had gone to . . .hospital to collect my COVID-19 results and that is why people doubted whether there was COVID-19 or not. There were no measures put in place. People were not sanitising, wearing face masks or social distancing at all. . . I felt so angry and I also concluded that there is no COVID-19. I did not see the reason why they confined us like that as no SOPs were followed in the quarantine centres. This was the same thing when I underwent the first quarantine in the border district. **(NI with 39-year-old male participant)**

Other participants were angered and frustrated by inefficiencies in the management of institutional quarantine. For instance, Charlotte described how she had been angered and frustrated by the substandard services she received from the quarantine centre after being charged exorbitantly. She had expected to find an organised, clean, and quiet place and a well-furnished room for her stay. To her dismay, the place was noisy, regularly hosting rowdy groups of people, and provided a basic room with no television or other form of entertainment. Essentially, she felt that the service provided was not worth the money she had paid.

> I had anger and frustration but I didn't have worry. I was very angry with those people I found; the noise, the smoking, the alcohol, sleeping late and the mere fact that I spent all that money to get a substandard service; all that made me angry. **(NI with 29-year-old female participant)**

For William, anger and frustration emanated from the poor handling of COVID-19 test results at his quarantine centre. He told of being released to go home, then picked rethe following day to be re-quarantined due to a mix-up in the final test results.

> I was already home, and guys started to send messages that guys we are going back for more 14 days; there was a positive person at the hotel. And I think that was the worst experience when they called everyone back . . . So, they picked everyone where they had dropped them. I got a call at night that we are picking you and don't run away. I was like what has happened? They said we got wrong results and that one person at the hotel has tested positive so it means all of you are suspects. They told me we need to be quarantined for more 14 days. I was picked in the morning I was already feeling low, angry and frustrated. I was tired of the hotel. **(NI with 30-year-old male participant)**

3.3.4. Loneliness and Mental Distress

Several participants reported feeling lonely because they were largely confined in their rooms or found themselves with strangers whom they could not freely interact with. Others reported experiencing mental distress from being unable to move and interact freely as they were used to. Moses reported feeling lonely because he could not interact with the colleague with whom he was quarantined within the same facility.

> It also happened because in the first week of quarantine, I really felt like I was alone because my friend was staying in a different room and it felt like I was in prison although they would allow us to go in the compound in the morning for vitamin D. **(NI with 31-year-old male participant)**

Olivia told of the loneliness she felt when confined alone in her room away from her family. "Yeah, loneliness. I was used to being with my family, and sisters but here I was locked up alone. It was challenging. A day would feel like it is a whole year," she said.

Unlike Moses and Olivia, Shamim had an opportunity to interact with others in her quarantine centre as the rooms were shared. However, she reported feeling lonely among strangers.

> I felt lonely because I didn't know the people I found there; I just met them there. That experience is equivalent to a child they have just taken to a new school; you meet new people and need time to understand and get used to them. **(NI with 26-year-old female participant)**

William told of the mental distress he experienced due to his inability to move and physically interact with others while in quarantine. "It was challenging; it was mental torture. I was in a place for many days, had no one to talk to physically, couldn't move, limited steps to make around; stayed in one place for very many days", he remarked.

3.3.5. Suicidal Ideation

One participant, Noah, reported contemplating suicide in his initial days of quarantine. He indicated that he had been extremely distressed and worried that he was infected with COVID-19 when he developed the idea of jumping off the building to commit suicide.

> I used to over worry especially at the start and I remember I also got some fever and since fever is one of the symptoms of corona, I started thinking that I have COVID-19. Since we were sleeping on the upper floor of the flat, I got an idea of jumping off the balcony to commit suicide. I was going to do it, then I noticed there were police officers below. I don't know how I dropped the idea. I really thank God I didn't jump off [the building] because I was going to die for nothing. **(NI with 31-year-old male participant)**

3.3.6. "Please Don't Reach Here": Resentment and Stigma from Close Relations, Social Isolation, and Strained Relationships

Several participants reported being resented and stigmatised by their immediate family, neighbours, friends, and other community members following their release from quarantine. In all the cases, the relations feared becoming infected by people returning from abroad and/or released from quarantine. There was a general perception in the country that COVID-19 was imported by travellers from abroad since the first confirmed case was a Ugandan returning from Dubai in the United Arab Emirates. It was not uncommon for people to call the police to arrest returnees from abroad as some of the study participants explained in the excerpts below.

Agaba related how his wife resented and isolated him in a room for a period of one week following his release from quarantine to ensure that he was COVID-19-free before allowing him to mix with her and the children.

> So, it was really challenging you are running away from here in the quarantine place but at home people are resenting you. She [my wife] said even if you come, we shall lock you alone in your room for a week until we see that you don't have those signs. And indeed, when I came, we have a 3 bed-room house so she had spared a room for me. And she told me, 'for the sake of the children you sleep in that room alone as we monitor you'; but I knew she feared for her own life. **(NI with 34-year-old, male participant)**

Beyond his household, Agaba reported being stigmatised by a neighbour who was aware that he was a frequent traveller. He narrated how she had taken extreme measures to ensure that the two families did not interact when she realised that he had returned home.

> Haha, we have one neighbour there who knows that I usually travel for 3–4 months. So, I think she was inquisitive to know that I was abroad. I think she thought I had corona (COVID-19). She had a group of builders who were constructing for her a fence and immediately she saw me approaching her compound she told me, 'No! Boss, please don't reach here. We know you have been out (abroad)'. She had put a string to separate us from her home and told us not to cross over. I was so shocked and I think everyone was scared about COVID-19. **(NI with 34-year-old, male participant)**

Unlike Agaba, Grace was quickly embraced by his wife and children when he returned from quarantine. However, he too was resented by other relations and the broader community. He told of how friends and other people in his neighbourhood avoided him, while others called the police on him, even though the medical team that had escorted him back home had assured the Local Council (LC) 1 Chairperson (local authority at village level) that he was free of COVID-19.

> Hehehe, it was tough and all people were just shocked and running away from me. Even close friends gave me a distance. My wife was pregnant and it was really delicate on our side. But we became strong and consoled ourselves that after all I was given treatment. . . COVID-19 was something strange and I don't blame them much. When you were away from home for a while then came back people would start to suspect you and call the police to pick you and take you for quarantine. Someone tried to call the police on me, but it did not work. You see when I was in quarantine no one got to know, but when I came out, I went with all my documentation to the LC1 chairman as proof that I was free from COVID-19. We came with the medical personnel who explained everything to the chairman and told him I was okay and not a threat to the community. But because it was something new and feared, all people gave me a distance and feared to interact with me. **(NI with 44-year-old male participant)**

Similarly, Pretty experienced resentment and stigma from her community following her return to the country and release from quarantine. She described how her erstwhile supportive neighbour had locked her house to prevent Pretty's children from playing with hers when she realised that Pretty had returned home. She indicated that the neighbour had supported her family while she was stuck abroad, but completely cut off ties when she returned because she thought Pretty and her children were potentially infected with COVID-19.

> Like my neighbour here is my friend but she banned her children from playing with mine freely; that mine might have COVID-19. She used to even help them here and there when I was away but when I came back, she locked her house. So that's the stigmatisation I am talking about. **(NI with 38-year-old female participant)**

Noah told of being isolated and called names by his workmates following his release from quarantine and return to work.

> The other challenge I faced is that when I got back, some people in the community were fearing to come close to me. My work mates; they would be somewhere and when you come to join and sit with them, they would walk away and you stay alone which really made me feel bad. That kind of behaviour actually took some time when it was happening. It took like one to two months of people isolating me. Those that were stubborn would even refer to me as corona while greeting me. . . **(NI with 48-year-old male participant)**

Mulungi narrated how close relatives withdrew their offer to host him when they realised that he had been recently released from quarantine. He was travelling home from South Sudan for treatment and had made prior arrangements to stay with these relatives to facilitate his access to care at one of the big hospitals in Kampala City. He reported that they changed their minds in fear that he could infect them with COVID-19.

> I have an uncle in. . . and I wanted to stay there briefly to go to. . . [Hospital] for my treatment. But when I reached Luweero I got a call that my aunt refused me to go to their home, that I will infect them with COVID-19. **(NI with 39-year-old male participant)**

All these cases portray the limited appreciation of the rationale and procedures of institutional quarantine by the general public. It is evident that several of them were not aware that only people free of the disease were released from quarantine.

This stigma not only caused anger, sadness, and social isolation to the participants but also strained relationships and complicated access to basic services for some of them. For example, Pretty told of how she was denied access to a local shop because the retailer was afraid of losing customers. She explained that some of the other customers gave the retailer ultimatums to stop selling anything to her, or else they would seek services from elsewhere.

> After like two days [after my return home], my neighbour that has a retail shop came and told me that someone said that if I keep buying from her shop, they will not buy from her anymore. That I was going to send away all her customers, so I should stop going there. Then I was like why? Is COVID-19 written all over me? Or who told them that I had COVID-19? **(NI with 38-year-old female participant)**

Mulungi reported feeling hurt and angry towards his uncle, which strained their relationship.

> I continued to get annoyed with my uncle. He did not even call to check on how I was doing. Okay he would have refused me to go to his home, but also not checking on me? It was so sad and painful and imagine he is my guardian who raised me like a real father. My uncle really hurt me that time. My sister said what if you were one of his biological children would he have chased you? I also wondered. But I calmed myself and tried to forgive him. **(NI with 39-year-old-male participant)**

Grace told of how he coped by restricting his interactions to minimise stigma from close friends and other community members.

> Slowly, life went to normal a bit for me. I was mostly with my family; I restricted my interaction with very many people to avoid problems. Even with friends who distanced themselves, I gave them space. **(NI with 44-year-old male participant)**

Essentially, COVID-19 reversed the public's perceptions and reactions to people travelling from abroad. Within the local communities of Uganda, travelling abroad has always been associated with prestige. However, in the context of COVID-19, returning from abroad became associated with a high risk of infection with the novel virus, hence triggering stigma from the community.

4. Discussion

We have presented the psychosocial and economic risks experienced by individuals placed under institutional quarantine to control the spread of the COVID-19 pandemic in Uganda. The aim was to highlight the economic and psychosocial risks faced in the process of being quarantined as well as during and after confinement so as to provide insights into resources, measures, and support systems that should be instituted to ensure the wellbeing of affected persons in the event of similar outbreaks in the future.

4.1. Economic Risks

The data show that the loss of livelihood and/or income and financial distress were the main economic risks suffered by persons placed under institutional quarantine. Financial distress was primarily associated with the exorbitant charges of private quarantine centres and extended durations of quarantine. The risk of financial distress due to exorbitant charges of gazetted private facilities and extended durations of quarantine in Uganda was also reported elsewhere [25]. However, this study shows that individuals who did not meet their quarantine costs directly—such as those subsidised by employers and hosted in public facilities—also often found it necessary to spend their own money to cover gaps in quarantine centre services and care, to meet their daily survival needs. As shown in the data, these persons often spent money on water, extra meals, soap, and internet data bundles to get by. In addition, this study shows that institutional quarantine contributed to the loss of livelihood and income for a number of persons, specifically those in the informal sector. On the whole, participants mainly deriving a livelihood from the informal sector were more susceptible to economic risks due to limited safety nets including savings, job/income security, support from employers, and flexibility in working arrangements. This suggests that the risk of suffering economic shocks during quarantine is aggravated for individuals whose economic situation is already fragile. These findings affirm the postulation made by Brooks and colleagues [20] that low-income earners were more likely to be affected by temporary income loss due to quarantine.

Data on the economic risks of institutional quarantine are generally limited. However, extant studies show that quarantine in any form (self/home, community or institutional) often causes economic instability and, particularly, reduced income for some individuals [20,21,24,46–50]. The economic risks of quarantine are nevertheless reported to be less significant in high-income countries largely due to better financial security including safety nets such as compensation from employers and the state [47,48]. Minimising the debilitating effects of institutional quarantine on the economic wellbeing of insecure individuals necessitates a systematic process of assessing real or potential risks and identifying tailor-made interventions to mitigate them.

4.2. Psychosocial Risks

We found that institutional quarantine exposed participants to a host of psychosocial risks across the spectrum right from placement to confinement to after their release. The major risks identified included fear, worry, loneliness, anger, mental distress, frustration, suicidal ideation, stigma from significant others, social isolation, and strained relationships. These risks are generally consistent with those identified in previous studies of institutional quarantine in high-income and low and middle-income countries (LMICs) [7,9,20–26,51–54]. Notably, studies on self/home quarantine also report a similar range of psychosocial risks [30,47,48,55].

On the whole, psychosocial risks were associated with a combination of factors at individual, facility, household, and community levels. These included limited knowledge about quarantine and COVID-19 and fear of infection with COVID-19 at individual, household, and community levels; COVID-19 infection, economic vulnerability, doubts about the existence of COVID-19, and social position of the quarantined person as the main breadwinner at the individual level; poor compliance with COVID-19 SOPs and institutional quarantine guidelines as well as poor amenities and services at the facility level; economic dependence on the quarantined person at the household level; and stereotypes about travellers and quarantined persons at the community level. Knowledge/information gaps, fear of infection, stereotypes about quarantined persons, and economic vulnerability were all identified as risk factors for experiencing adverse psychosocial outcomes for quarantined persons in both high-income and LMICs [7,20,21,23–25,28,30,49,52]. However, the significance of economic factors in driving psychosocial distress among quarantined persons is prominent in low-resource settings, largely due to the lack of social safety nets for affected individuals and families. For instance, Saurabh and Ranjan [9] found that economic difficulties such

as loss of jobs and income by the breadwinner and attendant uncertainty about the sustenance of the family in the future were the primary causes of the main psychological risks (worries, fear, helplessness) faced by children and adolescents placed under quarantine in India. In Nepal, BC and colleagues [28] identified economic issues including loss of employment and financial responsibilities and insecurities as a key source of distress for returnee migrant workers placed under quarantine during the COVID-19 pandemic. In Lebanon, Fawaz and Samaha [30] found that psychological distress among Lebanese health workers placed under quarantine, due to occupational exposure to COVID-19 patients, was often exacerbated by economic instability. Similarly, our study highlights economic risks as a key stressor for several of our interlocutors.

Moreover, while some studies found that quarantine for long durations of more than 10 days increased the odds of psychological distress [31,48], this study suggests that this risk may be compounded by factors within and outside the facility. For instance, we saw that some of the participants who spent a month in quarantine reported experiencing no psychological distress, yet those who stayed for shorter durations of 14 days were severely distressed. As shown in the data, the former participants reported being satisfied with the services and care they received. In contrast, those who were distressed were triggered by several issues within and outside the facility including being confined in their rooms, receiving poor quality services, a lack of information and psychosocial care, non-compliance with COVID-19 SOPs by the facility, loss of livelihood/income while in confinement, and uncertainty about the future and the survival of family members in their absence, among others. Our proposition is further supported by the findings of previous studies. On one hand, Rohanachandra and colleagues [31] found that the mental health outcomes of quarantined individuals in Sri Lanka significantly improved following the amelioration of living conditions in the facilities. On the other hand, BC and colleagues [28] identified poor living conditions in quarantine centres as a key driver of psychological distress among migrant returnees in Nepal. The centres generally provided poor facilities and services including food, water, sanitation, recreational activities, and medical and psychosocial care. In addition, BC and colleagues [28] identified economic insecurity amid social pressures to provide for the family as a key source of distress for quarantined migrant workers. In Qatar, Reagu and colleagues [7] found that symptoms of depression and anxiety among low-income migrant labourers in quarantine and isolation centres created to contain the COVID-19 pandemic in the country were exacerbated by social isolation due to the inability to communicate with their families back home as well as economic insecurities. These findings suggest that a holistic approach that addresses the broad physical, economic, and psychosocial needs of quarantined individuals and their significant others (families) may help to minimise the incidence of psychological distress regardless of the duration.

4.3. Facilitative Effects of Limitations in the Design and Implementation of Institutional Quarantine

We have shown that the identified psychosocial and economic risks were triggered by an interplay of factors at various levels. Nonetheless, the triggers were facilitated by systemic limitations in the design and management of institutional quarantine at the national level. Key among them were observed inconsistencies in the implementation of institutional quarantine guidelines, where some facilities provided psychosocial care as expected, while others did not. While some centres released participants after the mandatory 14 days, others took up to 17 days due to inconsistencies in the timing of final COVID-19 tests. In addition, some public facilities charged fees for tests, while testing was free in others. Yet, others provided a comprehensive and quality package of basic services including meals and entertainment, while others did not.

Other notable gaps include the combative approach for removing contacts from the community, which not only created fear and stigma but also provided the participants of this study no room to prepare for quarantine; a lack of minimum standards (such as on meals, hygiene, space) for gazetted quarantine centres; poor enforcement of standards and

compliance with COVID-19 SOPs across quarantine centres; inefficiencies in the management of test results such as when people were released without results and others had to be re-quarantined due to a mix-up in results at their centre; the narrow focus on the physical and psychological needs of quarantined individuals while ignoring economic and social issues such as their financial capacity and social position. This was in addition to the absence of safety nets for families of quarantined individuals, yet their ill-being was a common trigger of psychological distress for participants with the responsibility of providing for their families; a lack of safety nets for participants in private facilities whose duration was unexpectedly extended beyond 14 days; limited community engagement to educate people about the rationale, processes, and procedures of institutional quarantine, and addressing stereotypes about returnees from quarantine and abroad; and a weak information, education, and communication programme to increase participants' and communities' awareness about COVID-19. Gaps in communication about quarantine and prevention of COVID-19, inconsistencies in the timing of the final COVID-19 test, and poor enforcement of standards and conformance to COVID-19 SOPs were also reported in another study on institutional quarantine to control COVID-19 in Uganda [25]. Inefficiencies in the management of institutional quarantine, including overcrowding, inadequate measures to prevent transmission of infections, and ill-treatment and discrimination of persons in quarantine have been reported in other low-resource settings such as Nepal [28]. All the identified issues need to be addressed if the economic and psychosocial risks posed by institutional quarantine are to be mitigated.

4.4. Suggested Measures to Mitigate Identified Economic and Psychosocial Risks

Some of the interventions that may be considered to address identified economic and psychosocial risks include:

Mainstream screening for broad physical, psychological, social, and economic risks for quarantined individuals in the preliminary assessments conducted in the process of placing people in quarantine. This can help to inform the development of individualised response/care plans during and after quarantine. Screening for the broad range of risks necessitates the creation of interdisciplinary response teams including social workers, counsellors, psychiatrists, and clinicians to support the implementation of institutional quarantine.

Livelihood restoration initiatives or income support and safety nets for vulnerable families whose breadwinners are taken into quarantine should be developed. As shown in high-income countries, such safety nets can help to mitigate the effect of economic risk on the psychosocial wellbeing of quarantined individuals [48,52]. Provision of auxiliary support (e.g., basics such as water and food, transport) to at-risk individuals in private facilities can help to buffer them from financial distress. Regulation of the fees charged by private quarantine facilities to keep costs within market values may also help to minimise financial strain on individuals who opt for them. Moreover, improving the efficiency, quality, and package of care and services provided in public facilities may not only minimise or even eliminate the need to spend during quarantine but also render them more attractive to affected individuals. As a basic minimum, quarantine centres should consider providing quality and timely meals, safe water, adequate and hygienic facilities and amenities, free transport on release, and entertainment such as TVs and a free internet connection to mitigate the adverse effects of boredom and isolation. Further, to address the adverse effects of confinement and isolation, it is important to ensure that the physical space in the quarantine facility allows for interaction with the outside world by, for example, providing balconies.

In addition, targeted information and psychosocial care services may be necessary to address specific fears of individuals. As shown in the data, fear emanated from a myriad of sources that could not be sufficiently addressed using a blanket approach. For instance, similar to the study by Chen and colleagues [50], our study shows that fear among close contacts was primarily driven by their limited knowledge about institutional quarantine and the abrupt, and in our case, combative, manner in which they were removed for

quarantine. Moreover, Chen and colleagues [50] suggested that the intensity of fear may be heightened for persons quarantined in institutions, due to a possible sense of being trapped and a perception of loss of control [56], compared with those confined in their homes. This underlines the significance of targeted interventions to address fear in the context of institutional quarantine. However, it is evident that much of the fear would have been addressed if the participants had been given adequate information about COVID-19 and institutional quarantine as a control measure. Information gaps have been cited as a key driver of fear among quarantined persons in both high-income and LMICs [20,25,28,47,52]. Therefore, it is imperative to provide information and psychosocial support and care starting from the point of quarantining the individual until their release.

Where there is a risk of stigma following release from institutional quarantine, targeted interventions may be necessary to mitigate it. On the whole, stigma towards study participants was inherently driven by an interplay of underlying fear of COVID-19, the conception of travellers from abroad and quarantined persons as a high-risk group, limited awareness about the epidemiology and prognosis of COVID-19, and limited understanding of institutional quarantine as a mechanism for controlling the spread of infectious diseases. The stigmatisation of quarantined individuals in the fear of infection and due to misconceptions about a novel infectious disease such as COVID-19 and quarantine as a measure for controlling the spread of infectious diseases has been reported in both high-income and LMICs [20,21,25,52]. However, the perception of travellers from abroad as a high-risk group was common in LMICs where travel was a key driver of COVID-19 infections in the initial phases of the pandemic [23,25,28,29]. These patterns are consistent with the social constructionist view of social stigma, which places the sources of stigma at the societal level rather than in the bodies and identities of the stigmatised [57]. This implies that strategies to create mass awareness about infectious diseases (causes, transmission, prognosis, and prevention) and the critical role of quarantine in reducing the spread of infection at the community level may help to minimise stigmatisation of individuals released from quarantine.

It is imperative that gaps in implementation and enforcement of minimum standards as stipulated in institutional quarantine regulations and guidelines are addressed. To address psychosocial risks, psychosocial care workers including social workers, psychiatrists, and counsellors should be facilitated to contribute to the interdisciplinary team that supports individuals in quarantine.

5. Study Limitations

This study was qualitative and relied on a limited sample, and as such, the findings cannot be generalised. However, the contextual data generated provide rich insights into the psychosocial and economic effects of institutional quarantine in a low-resource setting. Further, this study was limited to the Greater Kampala and Metropolitan area and therefore does not include experiences of individuals in the marginal rural settings of Uganda. In addition, this study focused on individuals placed under institutional quarantine. Consequently, the findings may not represent the experiences of individuals placed under self or other forms of quarantine. However, similar psychosocial risks such as fear and stigma have been reported among persons placed under home or self-quarantine [48,49].

6. Conclusions

We have shown that institutional quarantine exposed individuals to an intricate range of psychosocial and economic risks. In the context of scarcity, economic risks contributed significantly to the psychosocial distress experienced by participants. The experience of specific risks was shaped by an interplay of individual and contextual factors including knowledge, beliefs, economic status, main occupation, social position (such as breadwinner), the reason for and place of quarantine, and the structure and management of quarantine. Overall, shortcomings in the design—particularly the disregard for economic and social issues—and implementation of institutional quarantine at the national and

facility levels contributed profoundly to the occurrence of risk. Therefore, minimising the economic and psychosocial risk associated with institutional quarantine calls for the integration of measures for the identification and continuous management of the broad range of potential risks to individuals from within and outside the quarantine facility, bridging gaps in the implementation of attendant procedures and processes, and enforcement of recommended standards across the board. In a low-resource setting, safety nets to address emergent economic risks are particularly critical for mitigating their overarching adverse effects on the physical and psychosocial wellbeing of quarantined individuals and their families.

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