Health and Welfare of the Survivors of the Khmer Rouge

Report

Study conducted

August 2021 – August 2022

Documentation Center of Cambodia (DC-Cam)

Executive Summary

For over two decades, The Documentation Center of Cambodia (DC-Cam) has been surveying the survivors of the Khmer Rouge regime to develop a better understanding of survivor needs, interests and perspectives. Thanks to a generous grant from the United States Agency for International Development (USAID) in the summer of 2021, DC-Cam has been able to significantly expand its efforts in this area, particularly as it relates to developing a better understanding of the health and welfare conditions of survivors and establishing its volunteer youth leadership corps dedicated to this endeavor—CamboCorps—which is inspired from the United States AmeriCorps. As of August 2022, DC-Cam has collected information from over 31,000 Khmer Rouge survivors, and the following reflects observations and analysis of this work.

DC-Cam is also inspired by the "Pentagonal Strategy" of the new Cambodian Prime Minister Samdech Moha Borvor Thipadei Hun Manet and the public health strategy of recently appointed Cambodian Minister of Health, the Honorable, Chheang Ra. Prime Minister Manet's Pentagonal Strategy outlines five guarantees that are laid out across six priority policy programmes. The first part of the Pentagonal Strategy is human capital development, which focuses on education, technical skills, health, social protection, food system and equity based on the spirit of "leaving no Cambodian citizen behind." DC-Cam sees the Pentagonal Strategy as a prudent and extremely important step forward in balancing Cambodia's rapid development with an equally important prioritization of the people at the grassroots level, who are the heart and soul of Cambodia. The first policy programme also involves the expansion of healthcare services towards the goal of providing universal health coverage. DC-Cam endorses this policy initiative (among others presented) because healthcare is one of the greatest priorities and needs of Cambodia's "Greatest Generation"—the survivors of the Khmer Rouge era.[1]

The health dimensions of the Pentagonal Strategy and the six priority policy programmes inform the vision of the Honorable Chheang Ra, Cambodian Minister of Health, who is committed to improving the ethics of doctors in Cambodia and earning the public's trust in Cambodia's public and private health services. Minister Ra has encouraged doctors to improve their communication with local people and support the modernization of public health services, including the regulation of private health services. Together, Prime Minister Manet's strategy and set of policy programmes and Minister Ra's vision for a modernized Cambodian health system are expected to improve the quality of lives of Cambodians today and for generations to come. DC-Cam looks forward to supporting these national-level objectives through research, education, and direct action programmes.

Perhaps unsurprisingly, DC-Cam has found most Khmer Rouge survivors who took part in its survey cited financial circumstances to be the primary reason for not seeking treatment for mental or physical health conditions, disabilities, or ailments. DC-Cam also found that among the physical or mental health conditions reported by survivors, hypertension, and gastrointestinal disorders, followed by malaria, mental illness, and heart disease, were, in this order, the most important health concerns and debilitating conditions for survivors. While DC-Cam has more work to do in developing an understanding of these issues, it is notable that these conditions also coincide with survivors' reported mental health conditions and concerns from their experiences under the Khmer Rouge regime. Eighty-seven percent of survivors who were surveyed by DC-Cam reported having troubling memories of the Khmer Rouge period that resonated with them to-date, and 25 percent of respondents reported still suffering nightmares of this period, even though these experiences occurred over forty years ago.

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[1] In the United States, the "Greatest Generation" is the colloquial term used to describe the generation of Americans who were born before or during the Great Depression and who ultimately fought in and won the Second World War. Cambodia's Greatest Generation is the generation that survived the Khmer Rouge and built the Cambodia that exists today.

Finally, DC-Cam found that medication, as opposed to visits to a public or private healthcare provider or hospital, is the primary method used for treatment in lingering or unexpected medical care needs. Survivors' reliance on medicine to meet medical care needs may indicate that, rather than financial resources alone, one's access to care may also be greatly influenced by other overlapping geographic or socio-organizational conditions of accessibility.

Access can be conceptualized in different ways—from the distribution of medical services, resources, and facilities to the external characteristics of a population, such as in insurance coverage, attitudes to medical care, and income. It is possible that improving access, and consequently improving the health and welfare of survivors of atrocity crimes, may be less a matter of addressing the financial circumstances of survivors, and more a question about how to make medical care more convenient, trusted, and reliable.

DC-Cam's research in this area is ongoing because DC-Cam continues to receive new survey and observational data under this project. For these reasons, these findings remain preliminary in nature; however, they raise many questions and implications that bear significant relevance for ongoing and potential future work with the survivor community in Cambodia and in other post-conflict countries.

Many survivors will pass away in the next five to ten years as many reach 70 years old or older. Because the life expectancy of Cambodians in general is approximately 70 years of age, unless we continue to dedicate resources and attention to collecting the oral history of this generation of survivors, we risk losing pieces of this history forever.

As DC-Cam continues its work in this area, we look forward to sharing our findings and recommendations with the public, not only to shine light on the plight, challenges, and barriers of access to essential health and social services for the survivors of the Khmer Rouge, but also where improvements can be made in the international community's conceptualization of justice for survivors of atrocity crimes in all post-conflict societies around the world.

Key findings

1) Cambodian survivors predominantly identify as poor, unemployed or employed in occupations of relatively low wages (particularly agriculture).[2]

2) Women represented a higher percentage of the respondents across all age groups.[3]

3) Cambodian survivors predominantly attributed any illness, disease, or ailment they are suffering to old age.[4]

4) Survivor communities appear to be concentrated in the Tonle Sap Lake and Plains regions of Cambodia.[5]

5) Hypertension, gastrointestinal disorders, and mental illness stood out as the most reported, potential health conditions that could have been directly or indirectly associated with life under the Khmer Rouge regime.[6]

6) A notable percentage of survivors (at least 1 out of 4 respondents in this study) are reported to still suffer from some type of mental health condition or symptom that can be attributed to experiences under the Khmer Rouge.[7]

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[2] *See* Figures 8-10 and relevant commentary.

[3] *See* Figure 4 and 7 and relevant commentary.

[4] *See* Figure 15 and relevant commentary.

[5] *See* Figure 2 and relevant commentary.

[6] *See* Figures 13 and 14 and relevant commentary.

[7] *See* Figures 25-27 and relevant commentary.

7) Medication, as opposed to visits to a public or private healthcare provider or hospital, is the primary method used for treatment by survivors in lingering or unexpected medical care needs.[8]

8) The majority of survivors received a COVID-19 vaccination; however, the fact that the older the generation of survivors, the reduced likelihood they received a vaccine raises an untested hypothesis that the older the generation the greater the challenge in providing new information, medicine or treatment.[9]

Recommendations

1) Actions, policies, or programmes aimed at addressing or offsetting the cost of medical care for survivors should be explored for purposes of improving survivors' access to medical care.[10]

2) Actions, policies, or programmes aimed at addressing or supporting the *support networks* of survivors will also improve survivors' access to care for survivors, particularly in remote and/or marginalized populations.[11]

3) Because women represented a higher percentage of the respondents across all age groups, there may be a potential need for greater attention to sex- and gender-sensitive care, resources, and support services for survivors.[12]

4) There is a need for greater attention to information, services, and resources that support healthy behaviors and routines among survivors.[13]

5) Future direct action or research programmes targeting survivor communities can target the Tonle Sap Lake and Plains regions of Cambodia; although, other areas of Cambodia, such as the Anlong Veng region, present possibilities for further research.[14]

6) There is a need for greater attention to information, services, and resources that support mental health among survivors and their families.[15]

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[8] *See* Figure 16 and relevant commentary.

[9] *See* Figures 22-24 and relevant commentary.

[10] *See* Figures 9-10; 19-21 and relevant commentary.

[11] *See* Figures 9-10; 16-17; 19-21 and relevant commentary.

[12] *See* Figures 4 and 7 and relevant commentary; *See generally* Sabine Oertelt-Prigione, "Putting Gender into Sex- and Gender-Sensitive Medicine," EClinical Medicine, (March 2020), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7152822/.

[13] *See* Figure 15; 22-24 and relevant commentary.

[14] *See* Figure 2 and relevant commentary.

[15] *See* Figures 25-27 and relevant commentary.

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I. Introduction

With the gracious support of the Cambodian Government, the United States Government, and many other foreign governments and donors, the Documentation Center of Cambodia (DC-Cam) has been able to support and advocate on behalf of survivors of the Khmer Rouge regime since 1997. To this end, for over two decades, DC-Cam has been interviewing and surveying the survivors of the Khmer Rouge regime to develop a better understanding of survivor needs, interests and perspectives. In 2020, the United States Senate first used the term "Khmer Rouge survivor" in the context of developmental assistance aimed at supporting access to health and social services, and this support further encouraged DC-Cam's expansion of its activities and work.[16]

Thanks to a generous grant from the United States Agency for International Development (USAID) in the summer of 2021, DC-Cam has been able to significantly expand its efforts in this area, particularly as it relates to developing a better understanding of the health and welfare conditions of survivors. As of August 2022, DC-Cam has collected information from over 31,000 Khmer Rouge survivors.

II. Research Methods and Process

DC-Cam collected data by way of a survey that was distributed to volunteers who visited survivors in their local community. DC-Cam relied upon volunteers to collect most of the information for this study. Volunteers were young students who were recruited for a three to six-month period of volunteer service under the CamboCorps initiative.

CamboCorps is a DC-Cam-managed Cambodian youth volunteer service that was inspired by the United States' volunteer corps known as AmericCorps.[17] AmeriCorps is a U.S.-based, national-level community development program that supports leadership training and professional development in the context of revitalizing communities across the United States. Using AmeriCorps as inspiration, CamboCorps allows youth to gain experience in public health/ community service projects dedicated to helping survivors of the Khmer Rouge regime.

Volunteers were recruited based on their education and professional experience, particularly in projects or work related to public health. Most volunteers were students ranging in age from 17 to 24-years old. Most volunteers had completed their secondary education and were in the process of completing an undergraduate degree or in some cases a graduate degree program. Volunteers demonstrated extraordinary skill with digital media, and this was demonstrated in the audio-visual recordings of interviews. Youth demonstrated excitement in the project, and they often collaborated in teams when they conducted interviews. Volunteers frequently sought out survivors they knew based on family or community background in their local communities. The use of volunteers presented increased risk of deviation between how the survey was designed and how it was conducted, who participated, and how responses were recorded. Survivors were generally identified based on their age and the volunteer's (or other community members') knowledge about their status as survivors; although, in many instances, survivors were discovered by the volunteers choosing to walk in a particular area or community, which was a common practice amongst certain volunteer teams.

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[16] *See* S. Rept. 116-126 (S583)-2 Department of State, Foreign Operations, and Related Programs Appropriations Bill, 2020.

[17] DC-Cam credits the USAID for its generous support, guidance, and mentorship in the organization and advancement of this volunteer youth leadership corps—from a pilot project in its inception to a national-level programme today.

Volunteers were provided with written instructions and a brief orientation on how to conduct the survey as part of their training. Volunteers collected the survey responses in either one-on-one interviews or focal group sessions with survivors and their families. Sometimes other members of the community would sit and attend the interview sessions to hear the stories. Volunteers were given guidance on how to introduce themselves to survivors and explain the purpose of the survey, including how the survey would be used, and the interviewees' rights to not answer a question or otherwise decline to be interviewed.

Volunteers were instructed that they should inform survivors that they do not have to answer questions and they can decline to participate in the survey. After obtaining consent to conduct the survey, the volunteer interviewer proceeded to verbally ask questions and the responses were transcribed or in some cases summarized on a notepad or other media by other volunteers supporting the main interviewer. In some cases, particularly in more remote communities, a volunteer may interview survivors on their own; however, this was the exception and generally these interviews comprised survivors in the volunteer's extended family. These notes would then be physically delivered, mailed or electronically sent to DC-Cam for review and analysis. Although volunteers collected information from a survivor's family members to supplement their surveys, the data reflected in this report (unless otherwise noted) was based upon entirely survivor responses to questions.

There were several methodological challenges and risks the team anticipated for this study, such as selection bias, measurement error, and potential confounding, i.e., the spurious association of a cause and an effect relationship for certain observations.

It has been over forty years since the fall of the Khmer Rouge regime. Many survivors of the Khmer Rouge period passed away, and the memory of survivors today continues to fade and, in some circumstances, become more difficult to recall and document due to mental and physical decline. On this point, there is an anticipated selection bias based on the extent to which a survivor could (and desired to) communicate that he was a survivor of the Khmer Rouge regime. DC-Cam required staff to presume an individual was a survivor of the Khmer Rouge regime if he or she was 40 years old or older—allowing them to receive services or support under the project. However, because most individuals who were in their 40s would have been infants during the Khmer Rouge regime, the priority of efforts for collecting oral history were directed to survivors who were 50 years old or older. As discussed later in this report, DC-Cam did not select individuals solely based on their reported victimization under the Khmer Rouge regime. DC-Cam also did not attempt to categorize survivors "victims" on one hand and "reported perpetrators" on the other; nor did DC-Cam discriminate in its support or services to survivors based on evidence or allegations of having an association with the Khmer Rouge regime or acts committed under the regime.

DC-Cam implemented multiple precautions or controls to mitigate the risk of re-traumatization of survivors. First, all DC-Cam staff receive training on working with survivors of atrocity crimes and how to identify, communicate with, and support persons suffering from post-traumatic stress disorder (PTSD). These trainings are conducted at least annually either through internal DC-Cam-organized workshops or workshops managed by DC-Cam partners like the Transcultural Psychosocial Organization (TPO).[18] DC-Cam provided an orientation to volunteers, which included information on these topics, and DC-Cam staff provided oversight, and in many instances, on-the-ground supervision, to the volunteers. DC-Cam engaged in pre- and post-interview meetings with volunteers to gauge their understanding of key fundamentals of working with survivors and collecting oral history, as well as how the sessions were conducted, lessons learned, and best practices. DC-Cam organized the visit of public health fellows, i.e., medical students, to multiple program activities for purposes of supporting quality control and innovation in DC-Cam's work with survivors, and DC-Cam regularly engaged multiple experts in public health, organizational development, and monitoring and evaluation as data was received on its activities with survivors. Finally, DC-Cam fielded a draft public health information guidebook, with support from international experts in public health from Stanford University, which provides some general information on the PTSD.

[18] *See* TPO Cambodia, (n.d.) http://tpocambodia.org/.

There was no comparison (or control) group, so the data does not provide any insights into differences between people exposed to genocide and atrocity crimes and individuals without this experience.[19] There was also the risk of error and confounding with the data.

In terms of error, there was a risk that data may not have been collected uniformly by all interviewers, e.g., different interviewers may have asked different questions or they may have taken different approaches to engaging with survivors, such that some responses may differ slightly because of how the question was asked, in what context did the survivor provide a response, and how was this response recorded by the interviewer.

The risk of error was further increased by the low technology and diverse means of survey recordation and transmission. Some surveys were recorded on paper; some surveys were recorded on a digital format; and some volunteers chose to record their interview in an audio-visual format that was not easily analyzed or processed with automated analytical or information management tools. Different survey formats resulted in different means of transmission, which created challenges with the processing and analysis of data. Because volunteers transmitted their surveys in various formats and media, the challenges and resource requirements associated with review and analysis of the data was significantly higher than had a single form, format, and transmission protocol was used.

The risk of confounding[20] was recognized as a significant risk of this study because it was a common risk associated with most, if not all, other related studies of survivors of atrocity crimes.[21] There was no approach or analysis taken that studied or considered potential recent (or post-atrocity crimes) life events that may have moderated, aggravated and/or otherwise influenced the physical or mental health of the survivors that participated in the study. There also was no study of trauma arising from trauma, i.e., the effects of trauma on post-conflict/post-genocide generations.

The foregoing weaknesses and challenges with the study were balanced by efficiencies and advantages that were determined to be preferable for the conduct of the study and the overarching goal of maximizing impact to the beneficiaries of the project. The use of volunteers allowed DC-Cam to scale-up the size of the survey population far beyond what could have been collected with organic staff and budgetary parameters, and DC-Cam's decision to accommodate multiple forms and formats for surveys ensured volunteers could use the media, format, and protocol that was most accessible, convenient, and comfortable for them based on local circumstances. In sum, the use of volunteers allowed DC-Cam to achieve unparalleled cost-efficiency and impact on survivors, reaching survivors from every province and even in remote communities.

Most survivors were selected based on their accessibility and availability to DC-Cam's youth volunteers. Youth volunteers were not provided with specific lists of survivors; rather, they were directed to "canvass"[22] a

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[19] In future studies, DC-Cam believes it would be helpful to study any similarities or differences in physical or mental health between people who experienced the Khmer Rouge regime (i.e, survivors who lived in Cambodia from 1975 to today) and people who fled Cambodia before 1975 and returned after 1979.

[20] Confounding refers to the mistaken or misinterpreted association between perceived injury, harm or disease and the experiences, trauma, or related circumstances of the relevant period. Confounding is a common variable that influences both dependent and independent variables in studies into the cause-and-effect relationships between mental health conditions and the atrocity crimes of the relevant case study.

[21] *See generally*, Jutta Lindert, et al., "Psychopathology of Children of Genocide Survivors: A Systematic Review on the Impact of Genocide on their Children's Psychopathology from Five Countries," Int'l J. Epidemiology 246-257 (2016) (discussing how the literature on genocide and psychopathologies is characterized by low epidemiological rigour, which includes lack of control for confounding).

[22] The term "canvass" means to conduct non-experimental door-to-door engagement with people to identify those people who meet the criteria for a particular survey or study. In many circumstances, "canvassing" is a technique that is used in political initiatives such as voter registration. Because there is no comprehensive database of survivors, let alone survivor communities (i.e., communities where the survivors are concentrated), canvassing was

particular area or community—asking individuals if they were survivors of the Khmer Rouge regime or if they knew anyone who was a survivor.

DC-Cam limited the questions in the survey to partly account for the risk of confounding. Confounding is essentially the possibility that other influences outside a particular study are influencing the dependent and independent variables, such that there are incorrect correlations or associations between one presumed causal factor and an effect. The association between periods of genocide- and atrocity crimes-related exposures and specific negative effects on a survivor's physical and mental health and welfare remain largely unmeasured in general[23] and completely unknown in Cambodia.

There was no comparison between the data DC-Cam collected and previous reports or studies per se. Even though there were outcome measurements for the project's impacts (in terms of measuring any changes on direct beneficiaries based on DC-Cam's inputs, activities, or services), there was no comprehensive approach or analysis taken that allowed for potential recent (or post-atrocity crimes) life events that may have moderated or otherwise influenced the physical or mental health or welfare of the survivor either in the past or in current project impacts. The study did endeavor to capture data related to the COVID-19 pandemic, and it is believed that COVID-19 likely impacted data because the data collection occurred during various community outbreaks. However, the extent of this impact is not measurable. These weaknesses both in data collection and comparative study are compounded by the relatively few studies on the long-term impact of genocide in Cambodia.[24]

Because the survey sought to identify the general conditions of health, welfare, and other conditions of survivors (as the survivors perceived them), there was a risk that any survivor's response of poor health, welfare or other condition was not based on any circumstance or experience related to the Khmer Rouge regime. Indeed, without the specific facts of an individual's background, a survivor's description of hypertension, stomach ailments, or depression could be arguably associated with his/her current socio-economic, homelife, or other circumstances as his/her experience under the Khmer Rouge regime. Notwithstanding this risk, the findings of the study should be able to overcome the influence of confounding, such that by looking across the population, regardless of time and circumstance, there are notable characteristics, patterns, and findings that are, more likely than not, directly derived from experiences or circumstances of the Khmer Rouge regime. This assertion could be measured in a study targeting specific individuals or small groups in the future; however, for this study, this assertion was not backed up by sufficient data given the prioritization on reaching the highest number of beneficiaries for a positive impact on their lives.

There were standardized instruments and methods to assess physical or mental health outcomes; however, to support the project's prioritization of impact on beneficiaries, the instruments that were utilized were subject to some variation (i.e., data may have been collected in more than one format or collection method). There was also no study of trauma arising from trauma, i.e., the effects of trauma on post-conflict/post-genocide generations, even though indications of this trauma manifested in the oral history collected by youth volunteers (either from the survivors or from their family members who may have participated indirectly in the interview of survivors).

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identified as the most cost-effective, efficient method for having volunteers identify and engage with survivors for DC-Cam's study.

[23] Even though there have been several different studies that provide insights into the association or effects of genocide and other atrocity crimes on survivors' physical and mental health, the findings and conclusions remain open for further analysis and confirmation. *See e.g.,* Stephen Z. Levine, et al., "Genocide Exposure and Subsequent Suicide Risk: A Population-Based Study," PLoS ONE 11 (2), (2016), available at https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0149524.

[24] *See* Damien de Walque, "The socio-demographic legacy of the Khmer Rouge period in Cambodia," Population Studies, Vol. 60, No. 2, 223-231 (2006). (Using data from two micro-level representative surveys of Cambodia in 2000, Damien de Walque attempted to look at the long-term socio-demographic consequences of the Khmer Rouge period.).

Expectedly, there were also different ethical challenges in collecting the data. DC-Cam did not include standardized questions addressing (nor did DC-Cam encourage volunteers to request information on) survivor positions, roles, or responsibilities in relation to actions or decisions relevant to the commission of atrocity crimes. The decision to omit these types of questions was based on DC-Cam's interest in maximizing survivor participation in the project, regardless of their culpability in atrocity crimes or association to the Khmer Rouge regime. Notwithstanding this decision, many survivors provided information about their positions, roles and responsibilities during the Khmer Rouge regime. Some volunteers took the initiative of asking the survivor these questions, though in most circumstances, survivors voluntarily provided the information without prompting or solicitation.

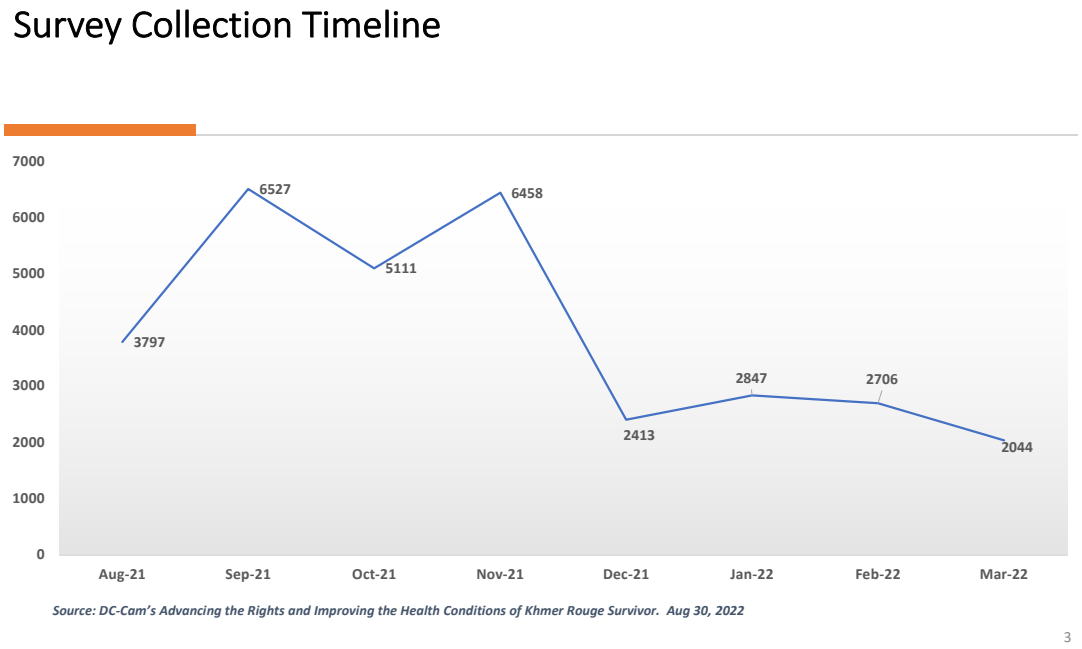
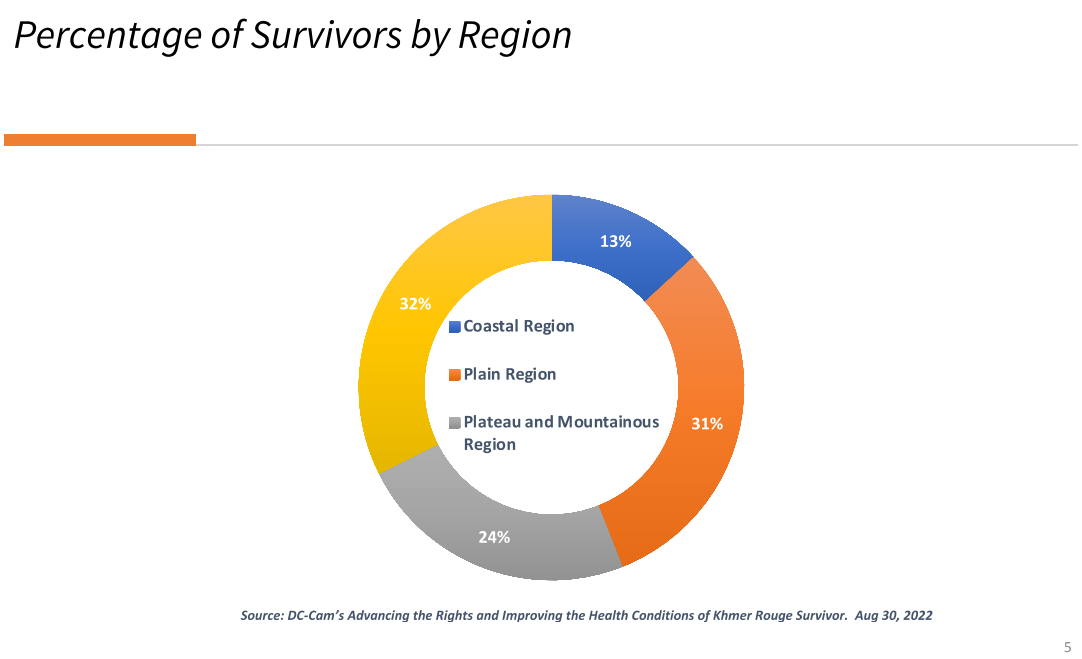


Figure 1: Survey Collection Timeline

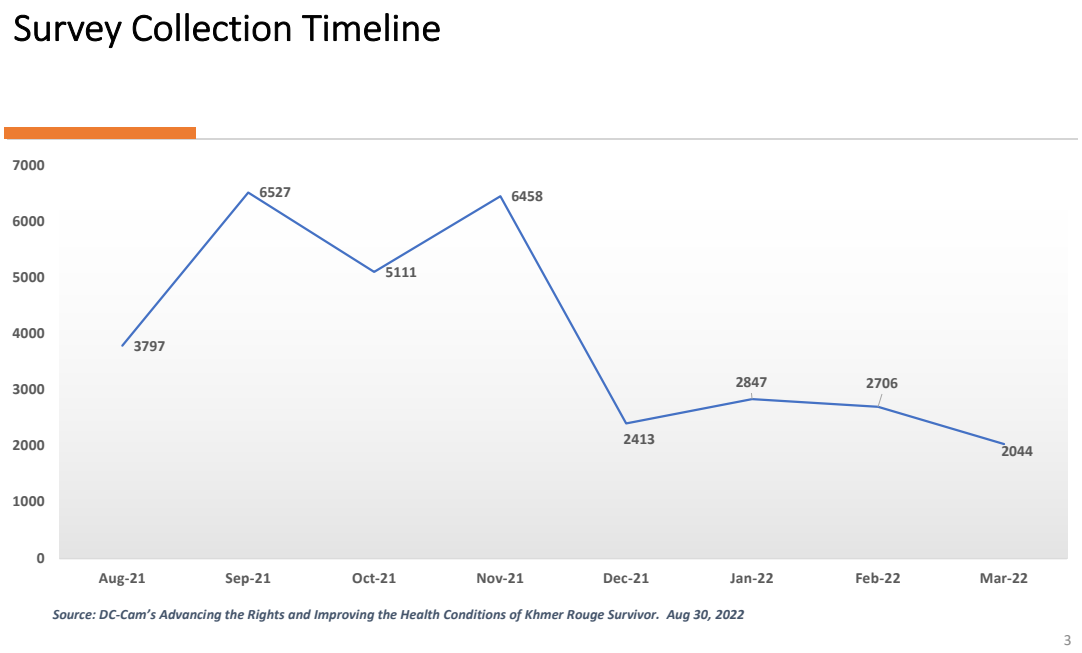
Between September and November 2021, DC-Cam collected surveys reflecting 18,000 survivors. After November 2021, DC-Cam collected approximately 2,500 surveys per month through March 2022.

The majority of respondents were between the ages of 60-69 (approximately 38 percent of all surveys collected). The next largest population of respondents were between the ages of 50-59 (30 percent) and 70-79 (23 percent). Broken down by region, DC-Cam received 3,405 surveys from the Pursat province, which reflected almost 11 percent of all surveys. The next largest province represented in the collection was Kampong Chhnang, where 2,618 surveys were collected (or 8 percent of the total collection).

Over 63 percent of survivors who participated in the study resided in either the Tonle Sap Lake (32 percent) or Plains regions (31 percent) of Cambodia as noted in the graphics.



Slide 2: Percentage of survivors by region.



Slide 3: Survey Collection Locations

Whereas DC-Cam collected responses from survivors in every province, certain provinces and certain age groups in these provinces represented a slightly higher percentage than other provinces. For example, survivors in the 60-69 year age group represented the largest number of respondents for Pursat (1,328 respondents out of 3,405 respondents, representing 39 percent of the responses for Pursat). In nearly all the provinces, the 60-69 year old age group was the largest population of survivors. The two exceptions to this pattern were in Kampong Thom and Koh Kong. In both provinces, the 50-59 year age group represented a slightly larger group in the collection of responses.

The Kampong Chhnang, Kampong Cham, and Kep provinces saw the largest group of respondents in the ages of 80-89. In Kampong Chhnang, DC-Cam received data from 223 respondents in this age group (or almost 9 percent of the total responses (2,618) for this province). In Kampong Cham, DC-Cam received data from 196 persons out of a population of 1,927 persons and in Kep, DC-Cam received 196 persons out of a population of 2,058 respondents. Both Kampong Cham and Kep's population of respondents in the 80-89 year age group made up approximately 10 percent of the population of respondents for the province.

The province of Ratanakiri produced the largest population of survivors in the age group of 30 to 49 years of age. Out of a population of 1,802 respondents for Ratanakiri province, 45 (or just over 2 percent of the respondents) are reflected.

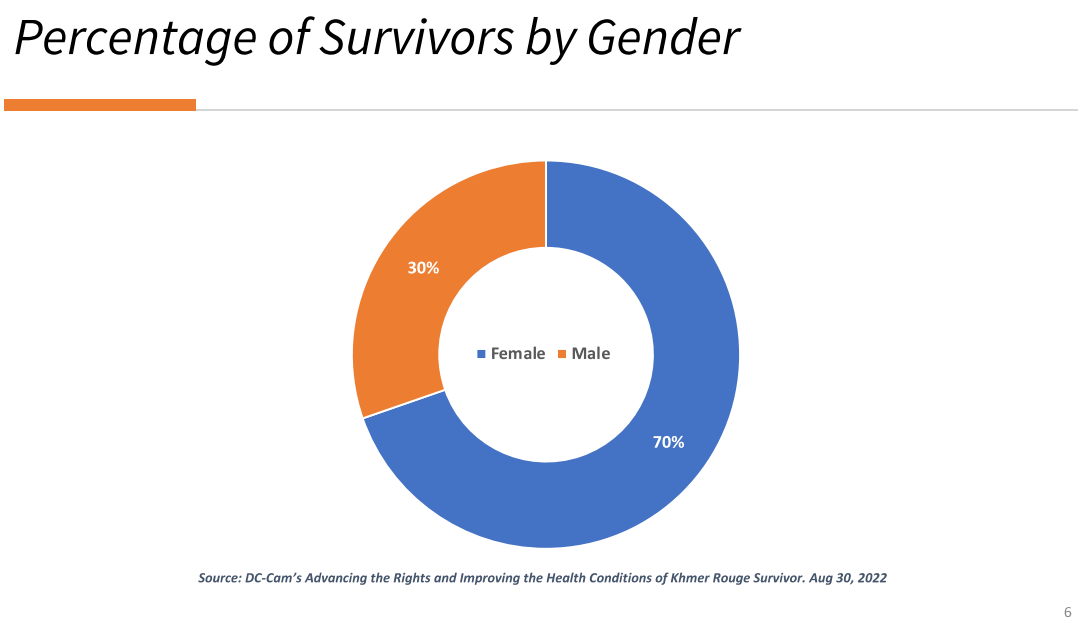


Figure 4: Percentage of survivors by gender

Capital/Provinces	Survivor Age by Group						
	30-49	50-59	60-69	70-79	80-89	90-Above	Total
Banteay Meanchey	4	547	**695**	409	102	9	1766
Battambang	-	165	**245**	147	58	4	619
Kampong Cham	9	441	**677**	592	196	12	1927
Kampong Chhnang	17	789	**945**	611	223	33	2618
Kampong Speu	-	132	**188**	148	43	2	513
Kampong Thom	-	58	**42**	40	13	-	153
Kampot	18	425	**545**	416	122	21	1547
Kandal	2	335	**504**	294	109	9	1253
Kep	4	629	**772**	427	196	30	2058
Koh Kong	4	180	**154**	79	42	3	462
Kratie	2	243	**376**	289	84	5	999
Mondulkiri	7	229	**194**	106	38	6	580
Oddor Meanchey	2	81	**135**	53	15	-	286
Pailin	5	183	**282**	76	20	2	568
Phnom Penh	4	360	**479**	268	101	9	1221
Preah Vihear	6	592	**619**	324	132	26	1699
Prey Veng	7	333	**531**	360	60	7	1298
Pursat	12	1153	**1328**	715	180	17	3405
Ratanakiri	45	578	**636**	322	169	52	1802
Siem Reap	3	203	**313**	182	33	3	737
Sihanouk Ville	-	11	**31**	24	2	-	68
Stung Treng	15	563	**660**	384	147	41	1810
Svay Rieng	1	130	**147**	120	41	3	442
Takeo	6	365	**523**	359	136	8	1397
Tbong Khmum	20	532	**797**	533	205	30	2117
Total	193	9257	**11818**	7278	2467	332	31345

Source: DC-Cam's Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivor. Aug 30, 2022

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Figure 5: Survivor age group

Capital/ Provinces	Cambodia population statistics disaggregated by Age (2021)								
	Total Population 2021			Total 60-80plus 2021			Total 60-69 2021		
	Total	M	F	Total	F	M	Total	M	F
Banteay Meanchey	838070	408420	429650	60138	36746	23393	55069	15476	22943
Battambang	1277395	638369	639026	119055	72214	46840	76915	31653	45262
Kampong Cham	1189756	585676	604080	68092	42668	25425	65807	16372	26023
Kampong Chhnang	584079	281903	302176	6076	3117	2959	30480	2266	2389
Kampong Speu	866445	421061	445385	10100	5541	4558	42394	3397	3714
Kampong Thom	791738	386125	405614	31616	18260	13358	41563	8372	11087
Kampot	698161	348016	350145	3549	1869	1680	38419	1245	1259
Kandal	1258007	612369	645639	106422	64792	41628	74954	25861	39946
Kep	43792	21810	21982	70259	43257	27003	2295	17167	27299
Koh Kong	139704	70312	69392	77453	50206	27247	7111	18655	29782
Kratie	398387	194358	204029	24469	13717	10751	19457	7629	9214
Mondul Kiri	83062	41890	41172	97728	61403	36324	2504	21885	33248
Oddar Meanchey	273346	136057	137289	114221	72072	42147	13598	24033	46139
Pailin	77677	38935	38742	56694	36519	20174	4654	12594	23906
Phnom Penh	1910149	931104	979045	82902	48902	34000	130760	22782	32287
Preah Sihanouk	291457	144514	146944	15402	8388	7014	16842	4982	5661
Preah Vihear	284201	141312	142889	44206	27440	16766	10643	11364	18201
Prey Veng	1316637	640277	676359	48084	29550	18533	70172	12210	18271
Pursat	517394	250558	266835	199519	118095	81422	29565	53001	77758
Ratanakiri	211798	104223	107576	11605	6397	5208	8128	3743	4385
Siem Reap	1061063	516378	544685	125066	76284	48781	48437	30421	44532
Stung Treng	145470	73184	72286	8944	5025	3920	6398	2854	3545
Svay Rieng	652834	323846	328988	18567	9980	8588	36501	6545	7053
Takeo	1044708	506004	538703	62323	36649	25675	55133	18223	23340
Tbong Khmum	918458	452531	465927	3477	2160	1318	44466	886	1410
Total	16873788	8269232	8604558	1465967	891251	574712	932265	373616	558654

Source: https://data.humdata.org/m/dataset/770386b0-d7c6-4ea7-abbc-beccac38c192?force_layout=light

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Figure 6: Survivor age group

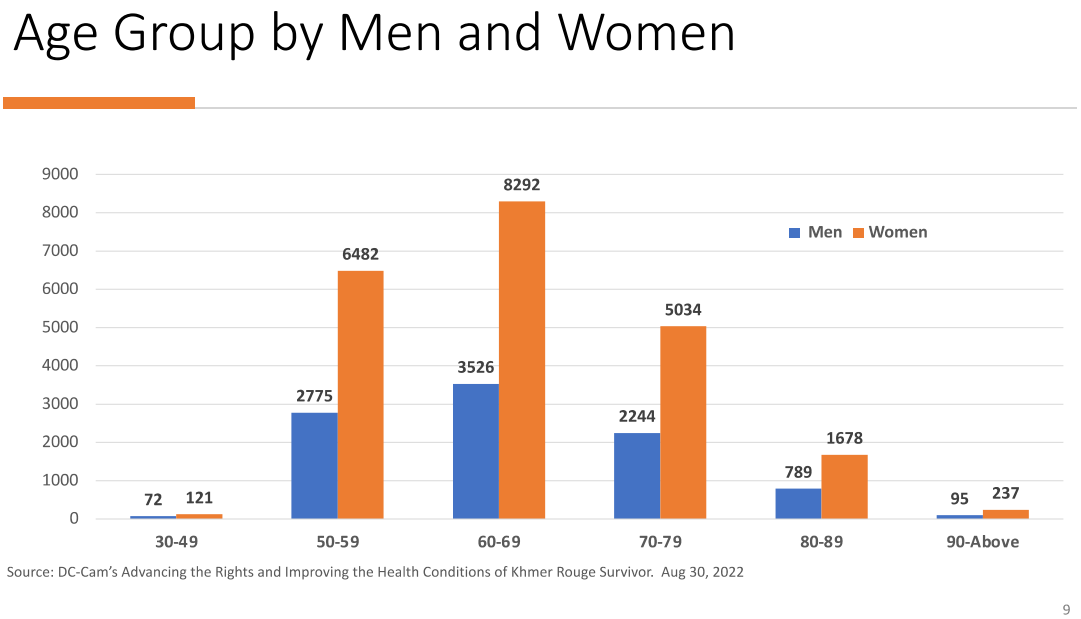

Figure 7: Survivor age and gender

Seventy percent of survivors who participated in the survey were female and 30 percent were male. Throughout all age groups, women represented a higher percentage of the respondents to DC-Cam's study. This

circumstance seems consistent with the fact that the Khmer Rouge regime targeted occupations, institutions, and roles in Cambodian society that were typically held by males, thus, indirectly resulting in the presumed death of more males than females under the regime. At least one study drew the conclusion that adult males were the most likely to die in comparison with other members of society.[25]

The Khmer Rouge specifically targeted former members of the Lon Nol regime, in particular members of the military, in addition to anyone who held positions of authority in Cambodia's society and culture, i.e., teachers, religious leaders, and individuals with education, training, or relationships with the international community. Because of the patriarchal nature of traditional Khmer institutions and culture, most of the persons who filled these positions or roles were male. Notwithstanding this circumstance, there is no evidence that would indicate females received any preferential treatment by the regime, such that they could avoid suspicion, arrest, or death. There are numerous accounts of women who were associated with men that were targeted by the regime and for this reason were killed. In sum, though it is believed that more male adults than female adults died under the regime, there is no evidence that demonstrates that women were less likely to be targeted because of their gender.

Breaking the data down based on the actual metrics of DC-Cam's study, within the 30-49 year old age group, women also constituted almost 63 percent of the total respondents in this group (121 out of a group of 193 respondents in the ages of 30-49). Within the 50-59 year old age group, women constituted 70 percent of the total respondents in this group (6,482 out of a group of 9,257 respondents in the ages of 50-59). Within the 60-69 year old age group, women also constituted 70 percent of the total respondents in this group (8,292 out of a group of 11,818 respondents in the ages of 60-69). Within the 70-79 year old age group, women also constituted 69 percent of the total respondents in this group (5,034 out of a group of 7,278 respondents in the ages of 70-79). Within the 80-89 year old age group, women also constituted 68 percent of the total respondents in this group (1,678 out of a group of 2,467 respondents in the ages of 80-89). Within the 90 years old and above age group, women also constituted 71 percent of the total respondents in this group (237 out of a group of 332 respondents in this group).

III. Dimensions of Survivor Health & Welfare

DC-Cam studied different dimensions or aspects of survivor welfare from occupation and marital status to economic conditions and sources of income.

Without question, atrocity crimes destroy infrastructure, wealth, and progress, and they perpetuate, if not precipitate, poor or failing social services, poverty and insecurity. During the Nazi German regime, Jewish business owners were forced to sell, or in most circumstances abandon, their businesses, property, and wealth. The confiscation or misappropriation of Jewish and other targeted groups' property is well-documented.[26] A 2008 study of survivors of the Rwandan genocide noted that almost all orphaned heads of households that were observed in the study reported low social support, high levels of poverty, and high rates of post-traumatic stress disorder (PTSD) and distress symptoms.[27] Likewise, in Sri Lanka, which has suffered terror, protracted conflict, and chronic insecurity, one of the

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[25] *See* Damien de Walque, "The socio-demographic legacy of the Khmer Rouge period in Cambodia," Population Studies, Vol. 60, No. 2, 223-231 (2006). (using data on sibling mortality, the author draws the conclusion that adult males were the most likely to die in society.).

[26] *See e.g.,* "Decree for the Reporting of Jewish-Owned Property," (April 26, 1938), Bulmash Family Holocaust Collection, available at https://digital.kenyon.edu/cgi/viewcontent.cgi?article=2705&context=bulmash

[27] *See generally* Lauren C. Ng, et al., "Life after Genocide: Mental Health, Education, and Social Support of Orphaned Survivors," 2 Int. Perspective Psychology 2015, 4, 83–97 (2015), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4517679/

"key factors distinguishing the chronically poor from the transiently poor is the lack of access to state services[,]" which is perpetuated and aggravated by conflict.[28]

In this study of Cambodian survivors, the highest percentage of men and women respondents reported their occupation as a farmer. Overall 63 percent of men and 53 percent of women reported their occupation as a farmer.[29] The next higher category of occupations was unemployed or unable to work.[30] One could say this higher percentage of relatively low wage, agricultural work aligns with the general history of the Khmer Rouge movement, which was overwhelmingly made up of the poorest and most economically marginalized members of Cambodian society. In addition, it is notable that the central aim of the Khmer Rouge movement was the exponential increase of Cambodia's agricultural output, which precipitated a forced labor movement that essentially pushed skilled or otherwise trained and educated classes (i.e., "New People") into agricultural occupations. Complementing this regime policy, the Khmer Rouge granted higher status and privileges to Cambodians with a rural, agricultural, or "unprivileged" background (i.e., "Base People"). This reordering of society and the socio-economic classes directly or indirectly meant that individuals from the agricultural class/Base People possessed at least a higher likelihood of survival, if only because they were trusted over people with a non-agricultural background, i.e., the New People.

DC-Cam's observance of survivors who identify as farmers provides indirect support for the conclusion that a high percentage (if not most) of Cambodia's educated people from this generation who did not flee the country before 1975, died under the regime.[31]

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[28] Jonathan Goodhand, "Violent Conflict, Poverty, and Chronic Poverty," Chronic Poverty Research Centre, 10-11 May 2001, available at https://www.files.ethz.ch/isn/128062/WP06_Goodhand.pdf.

[29] For the male population, 6,022 men reported their occupation as a farmer out of a population of 9,501 male respondents and 11,640 women reported their occupation as farmer out of a population of 21,844 female respondents.

[30] In addition, looking from the lens of gender, it was found that almost 15 percent of men and 24 percent of women reported their occupation as unemployed. Five percent of men and 6 percent of women reported that they are "unable to work." Almost 4 percent of men reported their occupation as civil servants and a nominal 82 women (out of 21,844 respondents) reported they were civil servants (or well below 1 percent). Three percent of men (313 men) and 6 percent of women (1,411) are local business owners and a smaller number occupy a few other professions most notably laborers, educators, fishermen, and handicraft workers.

[31] *See* KHAMBOLY DY, A HISTORY OF DEMOCRATIC KAMPUCHEA 16 Documentation Center of Cambodia: Cambodia (2007). To fulfill the Khmer Rouge's ideological vision, the Khmer Rouge abolished money, free markets, and normal schooling, and they targeted the wealthy, educated, and any persons that identified with the former government or with an association with religious, scientific, cultural, or foreign interests. Ultimately, the Khmer Rouge effectively purged the country of a significant percentage of its educated classes, leaving what would be a significantly higher percentage of survivors with a relatively low income background that was predominantly based on farming or low-skilled, rural occupations.

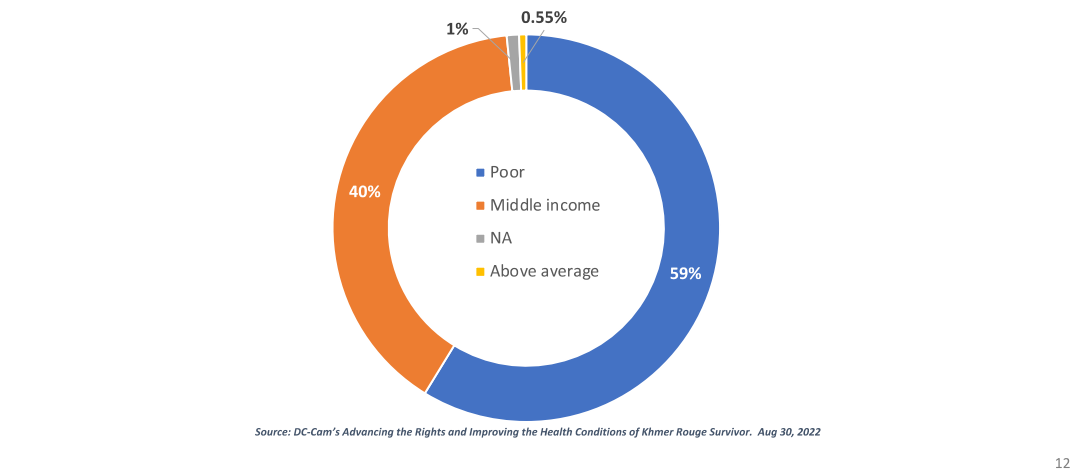
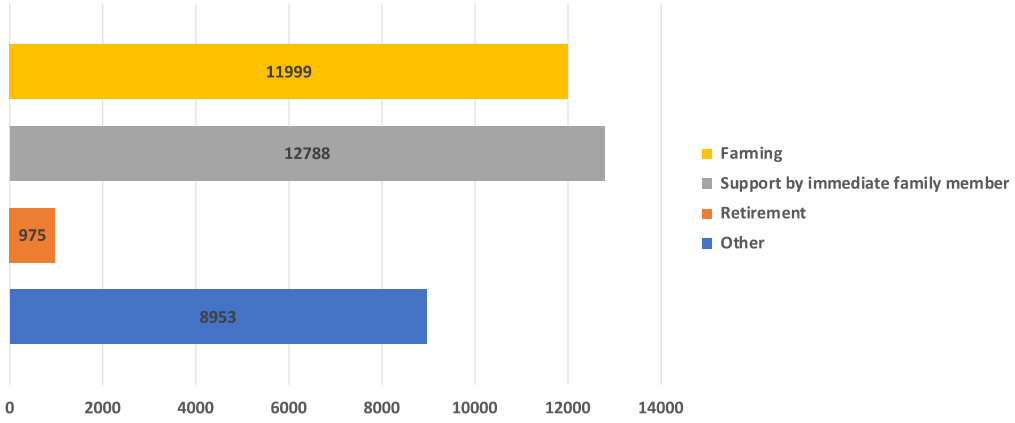


Figure 8: Economic conditions of survivors

Approximately 70 percent of respondents identified either farming or support by a family member as their primary source of income. Support from family members received a slightly larger number of affirmative responses than farming. Outside of these choices, approximately 26 percent of respondents identified other sources, which ranged from business-related fields to civil service, fishing, or crafts, and a small percentage (approximately 3 percent) received a pension or annuity as the primary source of income.

Fifty nine percent claimed poverty, and 40 percent claimed middle class income. Less than 1 percent claimed to have an income above average.

Source of Income



Source: DC-Cam's Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivor. Aug 30, 2022

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Figure 9: Source of income

Occupation by Men and Women

Occupations	By Men and Women					
	Men	%	Women	%	Total	%
Farmer	6022	19.21%	11640	37.14%	17662	56.35%
Unemployed	1416	4.52%	5236	16.70%	6652	21.22%
Unable to Work	489	1.56%	1374	4.38%	1863	5.94%
Local Business Owner	313	1%	1411	4.50%	1724	5.50%
Housewife	17	0.05%	1022	3.26%	1039	3.31%
Public Servant	377	1.20%	82	0.26%	459	1.46%
Labor Worker	172	0.55%	273	0.87%	445	1.42%
Retired	213	0.68%	120	0.38%	333	1.06%
Other	99	0.32%	216	0.69%	315	1%
NA	63	0.20%	235	0.75%	298	0.95%
Fisherman	118	0.38%	81	0.26%	199	0.63%
Educator	92	0.29%	55	0.18%	147	0.47%
Handicraft Worker	21	0.07%	98	0.31%	119	0.38%
Transport Worker	89	0.28%	1	0%	90	0.29%

Source: DC-Cam's Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivor. Aug 30, 2022

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Figure 10: Occupation by gender.

Sixty percent of survivors are married or living together, and 33 percent are widowed. Three percent never married or lived with a partner; 2 percent are divorced or separated; and 2 percent did not respond.

During the Khmer Rouge period, couples were often forcibly married, and many were married in mass ceremonies in which there could be a few or as many as a hundred couples at a ceremony. The Khmer Rouge did not allow men and women to choose their partner; rather, men and women were designated as couples to wed, principally for the purpose of producing children and the strict regulation of the family pursuant to the Khmer Rouge ideological vision for Cambodian society. In some circumstances, couples did not even know the name of their future spouses or even who they were before the ceremony. The nationwide policy to regulate family-building and marriage under a climate of fear and without consent of the individuals amounted to the crime of forced marriage and rape as determined by the Extraordinary Chambers in the Courts of Cambodia (ECCC) in Case 002.[32]

The high percentage of survivors that remain married or living together as opposed to divorced speaks possibly for the resilience of the institution of marriage in Cambodia despite the history of forced marriage that occurred in the Khmer Rouge regime; however, the study did not specifically ask survivors whether their marriage occurred before, during or after the Khmer Rouge regime, such that the percentage of married versus divorced survivors is associated in some way with the Khmer Rouge regime. In addition, the study did not explore the question on how many survivors were actually forced to marry under the Khmer Rouge regime, and how many of these couples actually remained married to their spouses from this time period.

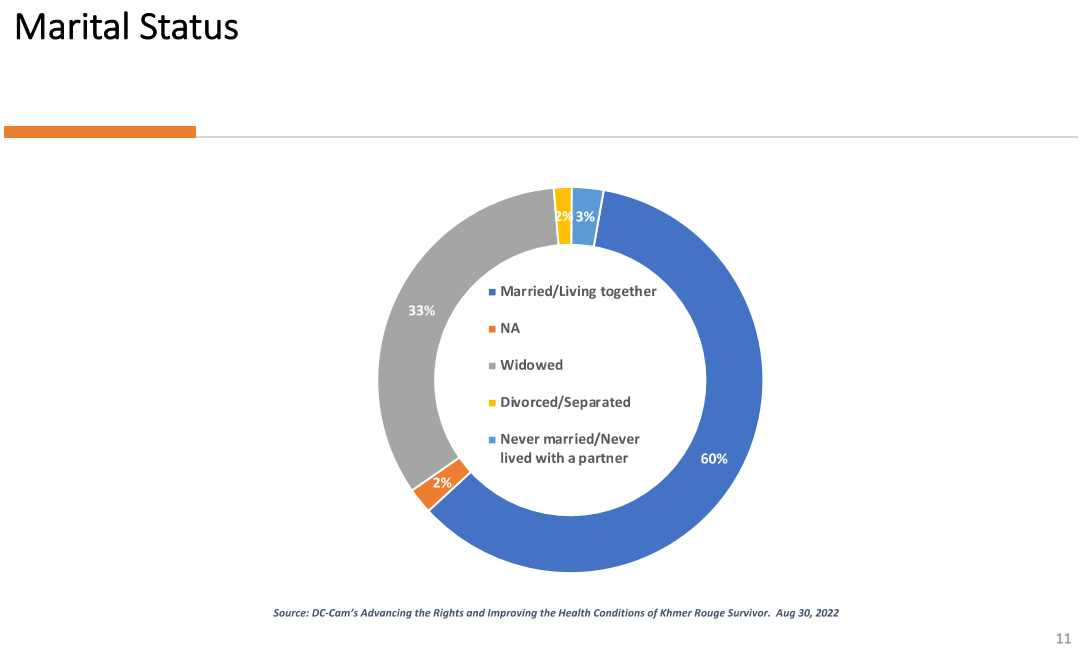

Figure 11: Marital status of survivors

[32] See Case 002/19-09-2007-ECCC-SC, "Appeal Judgment", Extraordinary Chambers in the Courts of Cambodia (ECCC) , Supreme Court Chamber, December 23, 2022, available at https://www.eccc.gov.kh/sites/default/files/documents/courtdoc/%5Bdate-in-tz%5D/F76_EN.pdf.

Approximately 3 percent of the total population of respondents claimed a physical disability (799 out of a population of 31,345 respondents). Of this group, almost 62 percent were blind, 17 percent had a disability with an extremity (i.e., leg or arm) and 6 percent claimed complete hearing loss. Approximately 15 percent claimed another form of physical disability besides these.

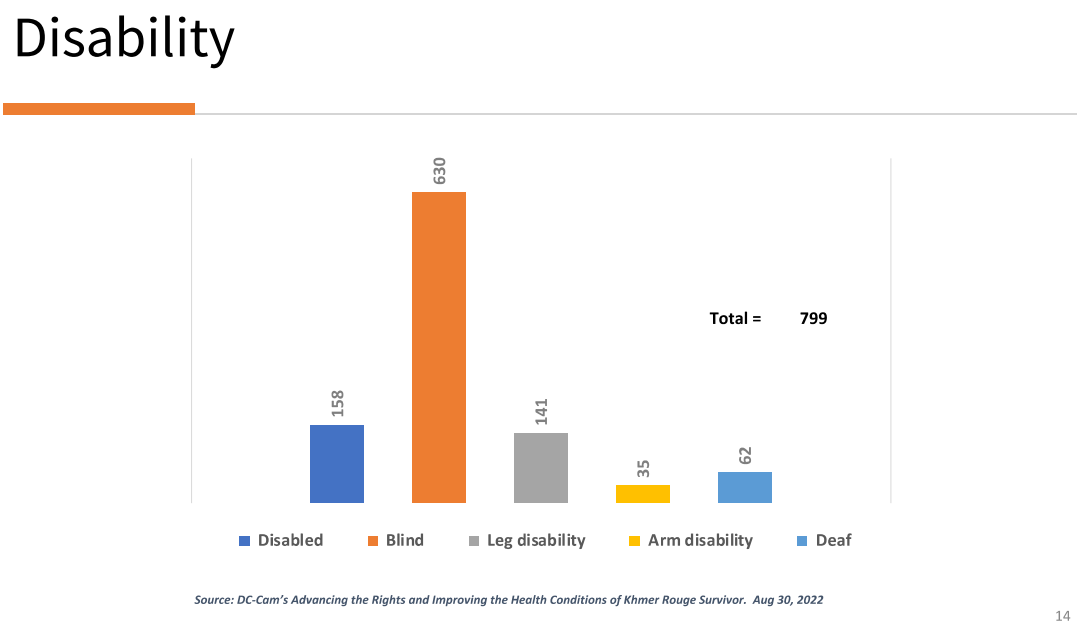

Figure 12: Disability of survivors

Survivors of the Khmer Rouge suffered from several common diseases, health conditions, or ailments. Respondents were allowed to select from a few options, and they could mark down more than one response to the question, "What are diseases or physical ailments that you are currently experiencing on a daily basis?" Forty-two percent of respondents marked down "hypertension" and 32 percent marked down "gastrointestinal disorders" as responses. Twenty-percent of respondents claimed malaria and 20 percent claimed mental illness. Almost 19 percent of respondents claimed heart disease and 12 percent claimed arthritis. Over 6 percent of respondents claimed they were suffering from diabetes mellitus and almost 6 percent claimed chronic asthma. Finally, almost 6 percent of respondents stated they were suffering from tuberculosis.

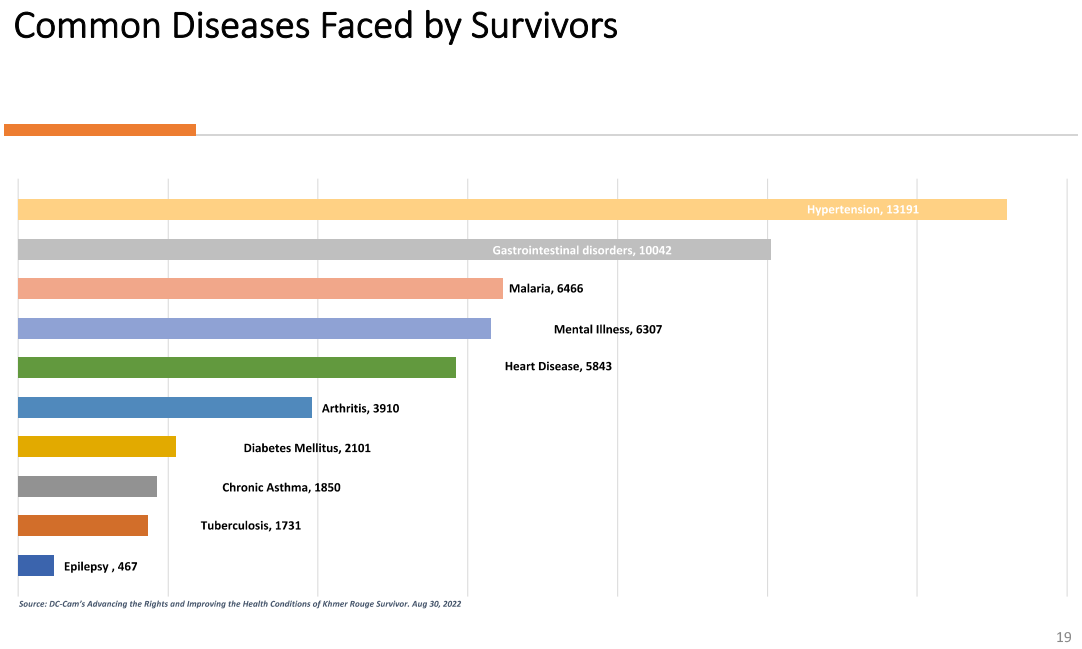

Figure 13: Common diseases faced by survivors

The respondents also listed a variety of other ailments, diseases, or chronic conditions, which are listed below in order of largest to smallest number of responses: Pneumonia; Hypoglycemia (high blood sugar); Hemorrhoids; Acidosis; Kidney disease; Hepatitis; Hypoglycemia (low blood sugar); Eye (or optical) diseases or impairments; Gynecological diseases; Cancers; Goiter; HIV; and Shingles.

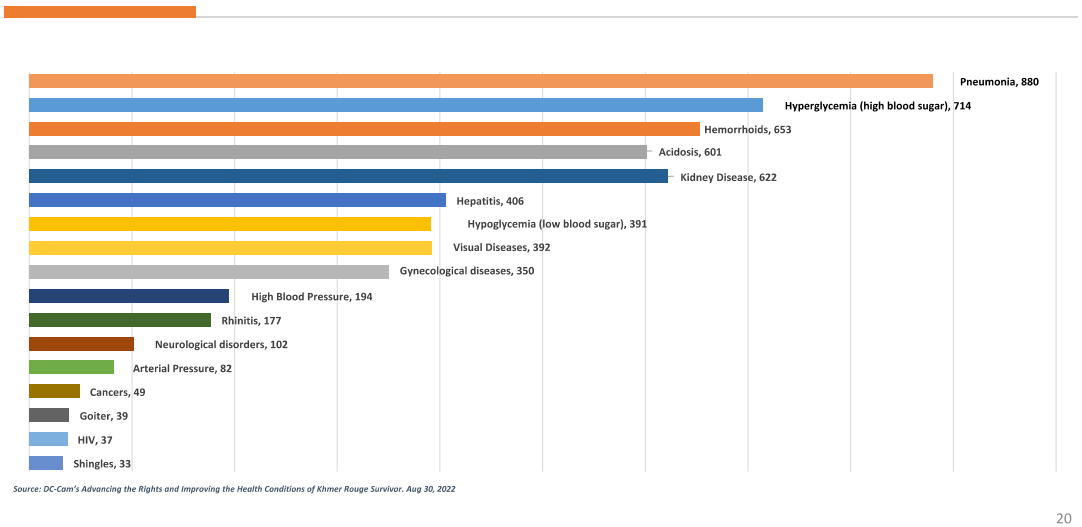

Figure 14: Diseases faced by survivors

Respondents identified several causes for their illness, disease, or ailment. Seventy percent of respondents attributed their illness, disease, or ailment to old age. Twenty-five percent of respondents attribute the cause of their illness, disease, or ailment to their experiences under the Khmer Rouge regime. Seventeen percent also attribute their conditions to malnutrition and 5 percent associated their conditions with unknown emotional affliction or trauma, and 5 percent associated their conditions to an accident.

As noted previously, confounding is a significant factor impacting the value of the foregoing data as reported by survivors. First, because the data is based on survivors' perceived health conditions, the reported conditions must be considered subjective in nature, such that survivors could claim a particular condition that may not be accurate as determined by a medical diagnosis by a licensed health provider. There is a risk that survivors may underreport or overreport their conditions, and there is also a risk that survivors' reported conditions may be based on an outdated medical diagnosis, such that the conditions may be significantly better or worse since this last diagnosis and their current health is actually different than what they are reporting. Finally, the survivors' reported causes for their conditions may be speculative at best or worse, based on their personal beliefs that have not been validated by a licensed medical provider. All of these circumstances clearly reduce the validity and reliability of the data; however, the data nonetheless provides an important reference for understanding how survivors perceive their health and underlying causes or bases.

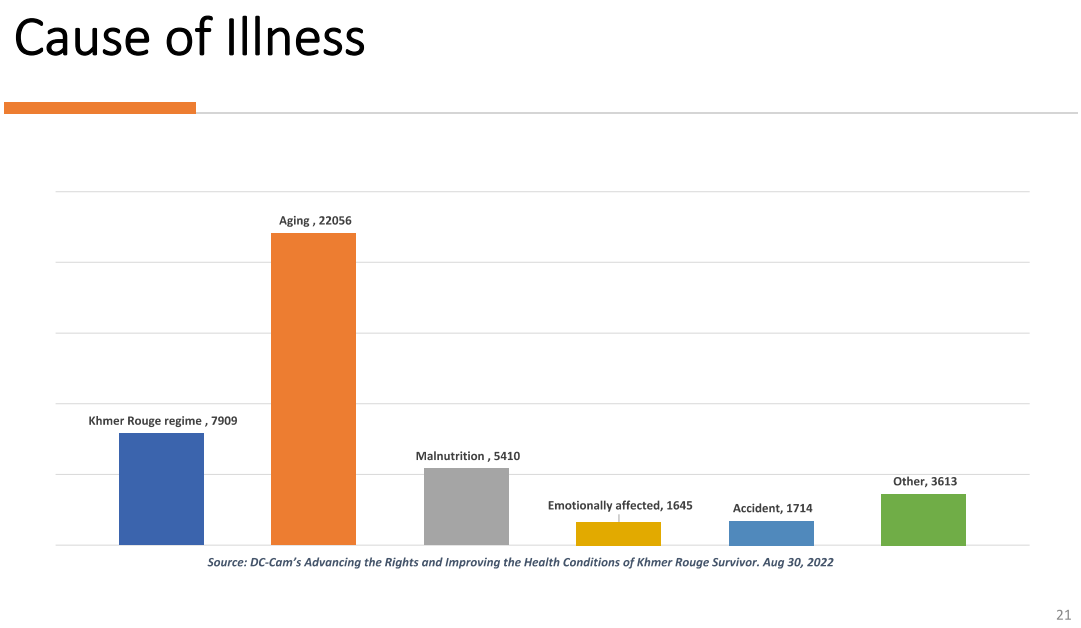

Figure 15: Cause of disease

Over 85 percent of the respondent population relied upon medication and 32 percent relied upon traditional herbs as treatment methods for their ailments. Only 13 percent received medical advice from a trained medical professional. Almost 7 percent relied upon traditional healing methods or the water blessing of a monk as treatment for ailments.

Notably, this study did not identify specific types of medicine or traditional herbs. Addition, this study did not clarify whether the use of medicine or traditional herbs was *ever* based on or overseen by a licensed medical provider. Further research may identify other factors that predispose survivors to depend upon medication or provide context to the significant reliance on medicine or traditional herbs as a form of treatment.

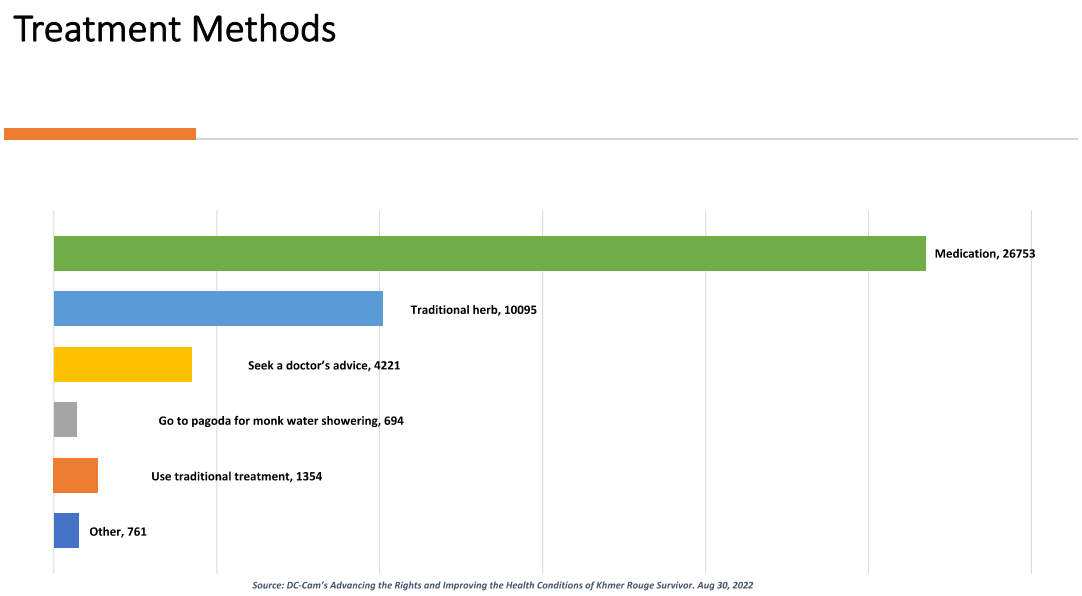

Figure 16: Treatment methods and places

In response to the question of treatment locations, 55 percent reported they sought treatment at a private clinic, and almost 48 percent also reported seeking treatment from a provincial/ commune hospital. Approximately 16 percent received care at a doctor's office or based on a doctor's home visit. Five percent received care from a practitioner of traditional medicine.

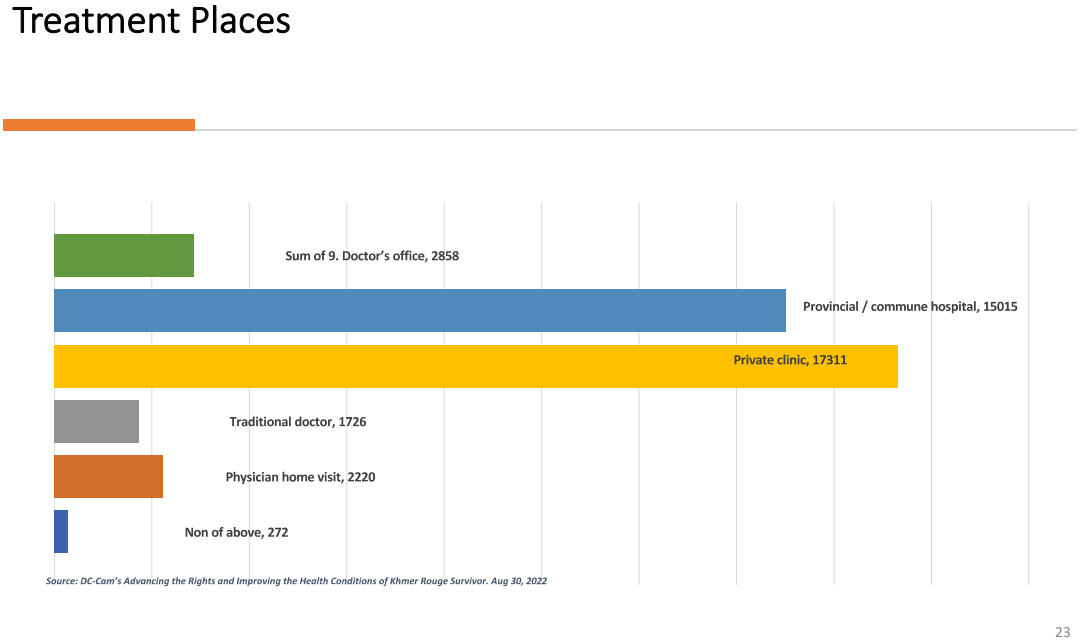

Figure 17: Treatment methods and places

In response to the question, "Have you or anyone in your household needed medical treatment in the past year, 76 percent of respondents stated "yes". Broken down by gender, 75 percent of female respondents and 78 percent of male respondents stated they required medical care.

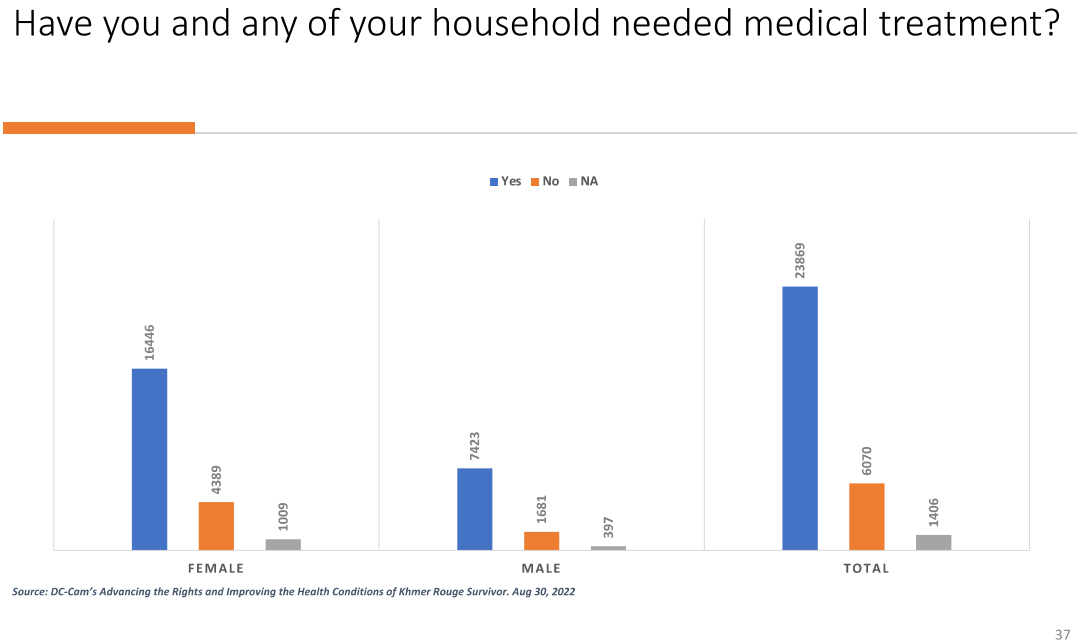

Figure 18: Access to medical care

In response to the question, "were you or your household member able to access medical treatment," 58 percent of respondents stated "yes" and 34 percent reported "no." Seven percent of respondents marked "did not know or no response" to the question. Broken down by gender, both female and male survivors responded in with the same percentages: 58 percent of female and male survivors for their respective gender population responded "yes" and 34 percent answered "no."

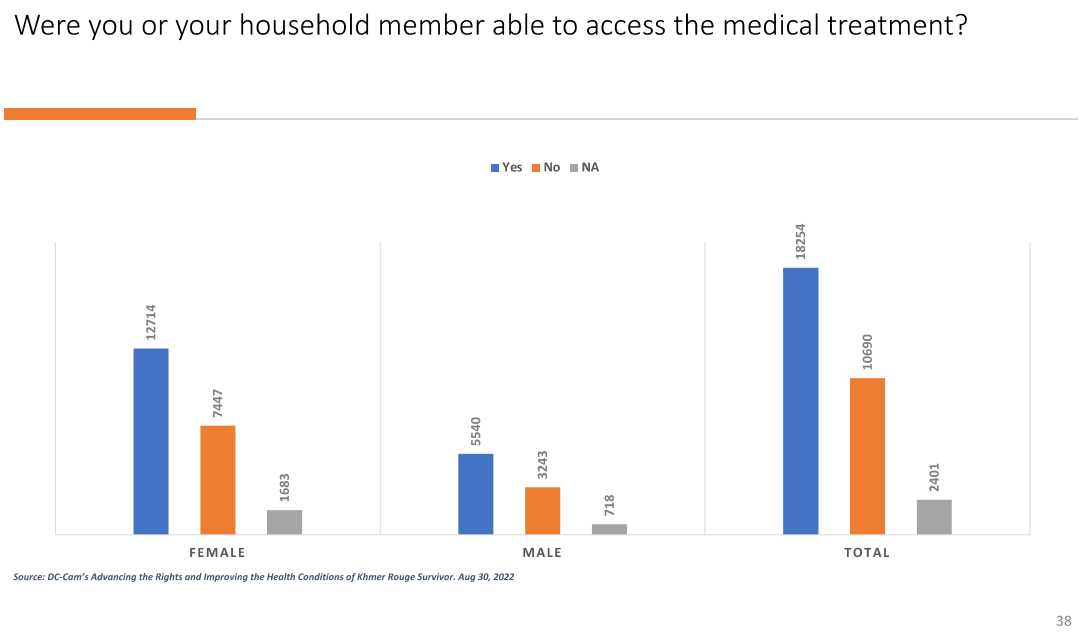

Figure 19: Access to medical care

Nearly 48 percent of respondents reported the lack of financial resources as the reason for not receiving adequate medical care. Twenty-one percent of respondents stated they did not seek care because they felt they could endure the illness, ailment, or disease. Almost 7 percent of respondents reported they were too far from a health facility and almost 4 percent preferred to rely on traditional health medicine or herbs for treatment.

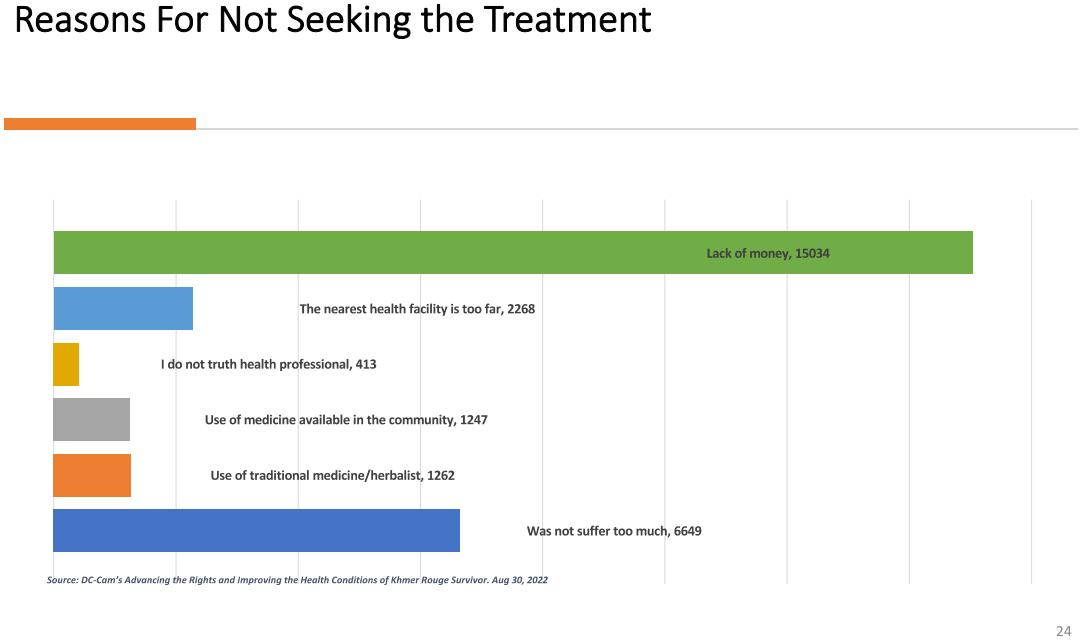

Figure 20: Access to medical care

In response to the question, "what was the main reason you and/or your household members were not able to access medical treatment," an overwhelming percentage of respondents identified the lack of financial resources. Forty-two percent of all total respondents identified financial resources as the primary reason for inability to receive medical treatment. Broken down by gender, 42 percent of female survivors and 41 percent of male survivors identified financial resources as the primary impediment to access to medical care. The availability of medical personnel was the second most identifiable reason for not being able to access medical care. Almost 7 percent of survivors identified this circumstance as the primary reason for not obtaining care. At a smaller percentage, almost 3 percent of survivors stated they did not receive care because they were turned away as a consequence of the facility being at or beyond its capacity to accept them as patients. Two percent of the respondents stated they were refused treatment. The questionnaire did not record the reasons for refusal.

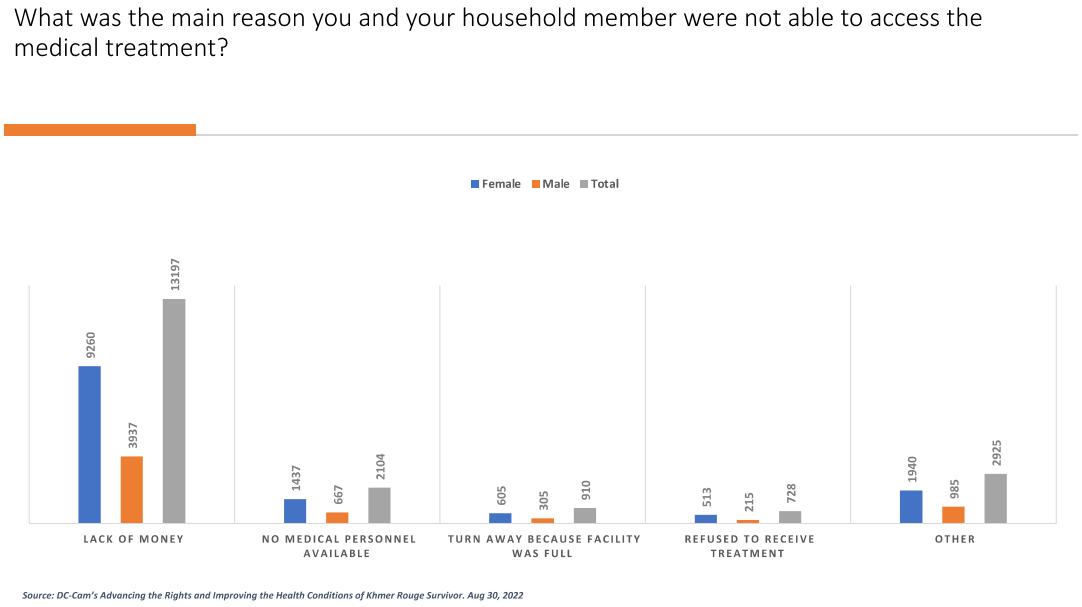

Figure 21: Access to medical care

Almost 84 percent of respondents stated they received a COVID-19 vaccination and approximately 65 percent agreed to receive one in the future. Broken down by gender, over 83 percent of female survivors and almost 86 percent of male survivors received a vaccination. Sixty-three percent of female survivors and almost 68 percent of male survivors also stated they would get a vaccine in the future.

Interestingly, there was an inverse relationship between the age group of the survivors and their response of having received a vaccine. The older the generation of survivors, the less likely they received a vaccine. Over 95 percent of women who were 30-49 stated they received a vaccine. Ninety percent of female survivors between the ages of 50-59 stated they received a vaccine, and approximately 85 percent of women aged 60-69 stated they received a vaccine. Approximately 78 percent of female survivors aged 70-79 received a vaccine and almost 60 percent of survivors aged 80-89 received a vaccine. Only 49 percent of female survivors aged 90 and above stated they received a vaccine.

For male survivors, the pattern was similar. Approximately 93 percent of male survivors aged 30-49 received a vaccine, and approximately 90 percent of male survivors aged 50-59 received a vaccine. For male survivors within the 60-69 age group, almost 88 percent stated they received a vaccine and approximately 83 percent of male survivors aged 70-79 reported receiving a vaccine. Approximately 71 percent of male survivors aged 80-89 received a vaccine and for survivors 90 years of age or older, 67 percent reported receiving a vaccine.

In response to the question whether they agreed to get vaccinated in the future, almost 74 percent of female survivors between the ages of 30-49 stated "yes". This response diminished to 66 percent and 64 percent for female survivors between the ages of 50-59 and 60-69. Approximately 61 percent of female survivors between the ages of 70-79 and 53 percent of female survivors between the ages of 80-89 affirmed they would get vaccinated in the future. Only 54 percent of survivors who were 90 years old or older stated they would receive a vaccine in the future.

The male population of respondents reported similar pattern of responses with respect to receiving future vaccinations. Approximately 76 percent of male survivors between the ages of 30-49 and 69 percent of male survivors between the ages of 50-59 and 60-69 stated they would receive a vaccination in the future. This response decreased

slightly with the rise in age of the respondents. Almost 67 percent of male respondents between the ages of 70-79 and 63 percent of male respondents between the ages of 80-89 reported "yes" to receiving future vaccinations. The one age group that differed from the reporting patterns was male survivors who were 90 years old or older. Sixty-seven percent of individuals in this age/ gender group stated they would receive future vaccinations, which is commensurate with the responses of male survivors between the ages of 70-79.

Number of survivors got vaccinated and agree to get vaccinate in the future

Survivor by Age and Gender	Vaccinated				Agree to get vaccinate in Future				
	Yes	No	NA	Total	Yes	No	Not Sure	NA	Total
Women	18154	3360	330	21844	13794	2059	110	5881	21844
30-49	115	5	1	121	89	4	-	28	121
50-59	5853	536	93	6482	4282	385	27	1788	6482
60-69	7110	1064	118	8292	5336	665	44	2247	8292
70-79	3953	996	85	5034	3065	589	22	1358	5034
80-89	1006	643	29	1678	893	365	15	405	1678
90-Above	117	116	4	237	129	51	2	55	237
Men	8168	1184	149	9501	6460	621	40	2380	9501
30-49	67	3	2	72	55	5	-	12	72
50-59	2509	227	39	2775	1918	131	7	719	2775
60-69	3100	376	50	3526	2427	196	20	883	3526
70-79	1868	337	39	2244	1501	167	11	565	2244
80-89	560	210	19	789	495	104	2	188	789
90-Above	64	31	-	95	64	18	-	13	95
Total	26322	4544	479	31345	20254	2680	150	8261	31345

Source: Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivor/DC-Cam, Aug 30, 2022

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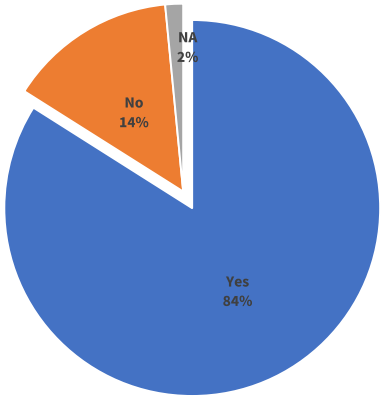
Figure 22: Survivors and vaccinations

Survivors Who Received Vaccine



Source: DC-Cam's Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivor. Aug 30, 2022

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Figure 23: Survivors who received vaccinations

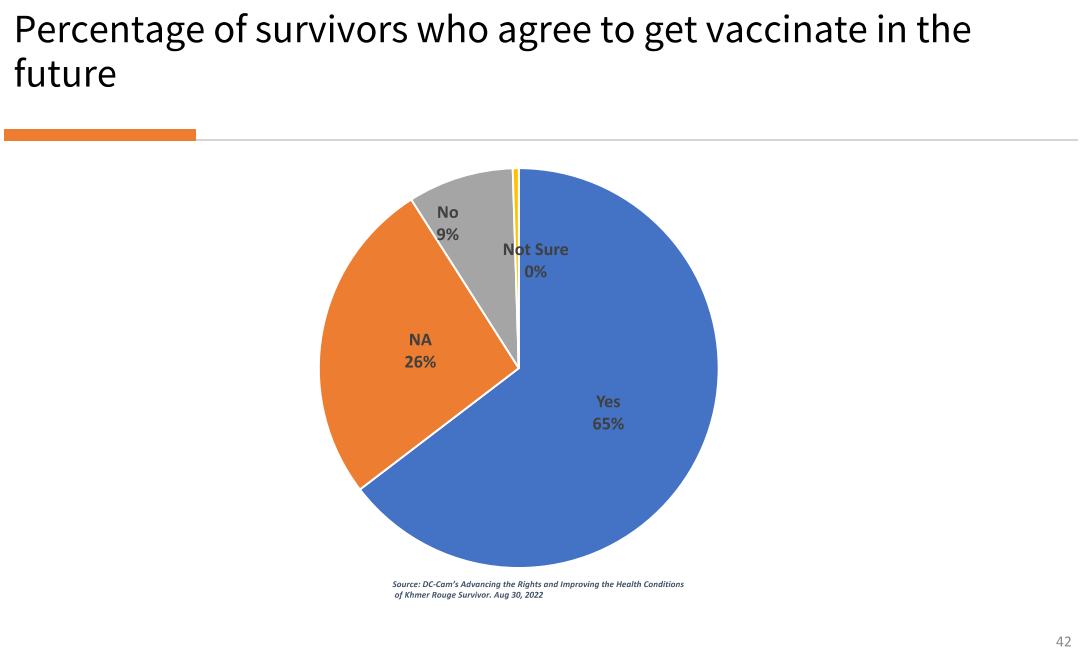

Figure 24: Percentage of survivors willing to get the vaccination in the future.

IV. Memories of Survivors

There is a significant need for research on the impact of atrocity crimes on mental health, as most studies of the survivors of atrocity crimes are largely observational and lacking in epidemiological rigor.[33] Notwithstanding this circumstance, it seems like an irrefutable fact that individuals who experience atrocity crimes can be said to have experienced stressors that will make them more likely to suffer from mental health problems than individuals who have not had such experiences. 'The impact of genocide continues long after the killing has ended, leaving lifelong scars on survivors and, potentially, their offspring."[34] Based on a review of studies conducted from 2000 to 2017, the World Health Organization estimated that in conflict-affected areas, the prevalence of mental health disorders, including PTSD, depression, and anxiety, is approximately 22 percent. "Even for those who do not meet the full criteria for a mental health disorder, many will experience significant and potentially debilitating symptoms that adversely affect their functioning and quality of life." (World Health Organization…)

[33] *See* Jutta Lindert, et al., "Psychopathology of children of genocide survivors: a systematic review on the impact of genocide on their children's psychopathology from five countries," Int'l J. of Epidemiology 2017, 246-257 (finding that the "literature on genocide and psychopathologies is characterized by low epidemiological rigor" and "there is a lack of longitudinal studies in the field of genocide and health studies.").

[34] *See* Jutta Linder, et al., "The long-term health consequences of genocide: developing GESQUQ – Genocide Studies Checklist," Conflict and Health 13:14 (2019).

For Cambodia, the survivors of the Khmer Rouge were generally exposed to a wide spectrum of torture, depravation, forced labor and forced transfer, in addition to crimes of violence including mass executions. Given the amount of time that has passed, there is no question that there are many possible confounding variables between the experience of the Khmer Rouge regime and current mental health symptoms. However, this circumstance should not diminish the presumption that there is a percentage of the survivor population suffering from mental health disorders and/or other potentially debilitating mental health symptoms that at least partially originate from the Khmer Rouge period.

Out of the entire survivor population who participated in the study, 25 percent stated they still had recurring nightmares about life under the Khmer Rouge (and the remainder, or 75 percent, stated "no"). This response percentage was the same for both genders, with 25 percent of both female and male respondents stating they had recurring nightmares. In response to the question, what feelings do they have when they reflect upon the Khmer Rouge period, approximately 65 percent felt anger when they reflect on the Khmer Rouge period; almost 45 percent felt afraid, and almost 36 percent felt sad.

Khmer Rouge Experienced: Emotions and Memory by Age and Gender

Age Group/ Gender	Haunted by KR Experience	Nightmare About KR Experience	When Remember about KR, I Feel:				
			Angry	Afraid	Forgotten	Forgive them	Sad
Total	***26983***	***7784***	***20464***	***14096***	***1977***	***1167***	***11148***
50-59	8149	2558	6085	4368	549	285	3397
60-69	10359	3069	7889	5244	693	432	4209
70-79	6245	1654	4802	3306	476	326	2597
80-89	1989	454	1493	1040	219	116	833
90-Above	241	49	195	138	40	8	112
Female	***18734***	***5365***	***14204***	***10202***	***1435***	***752***	***7820***
50-59	5680	1787	4224	3171	395	195	2407
60-69	7253	2142	5536	3837	505	275	2950
70-79	4291	1102	3313	2356	345	202	1802
80-89	1340	297	995	735	161	74	581
90-Above	170	37	136	103	29	6	80
Male	***8249***	***2419***	***6260***	***3894***	***542***	***415***	***3328***
50-59	2469	771	1861	1197	154	90	990
60-69	3106	927	2353	1407	188	157	1259
70-79	1954	552	1489	950	131	124	795
80-89	649	157	498	305	58	42	252
90-Above	71	12	59	35	11	2	32

Source: Advancing the Rights and Improving the Health Conditions of Khmer Rouge Survivors, Aug 30, 2022

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Figure 25: Memories of survivors.

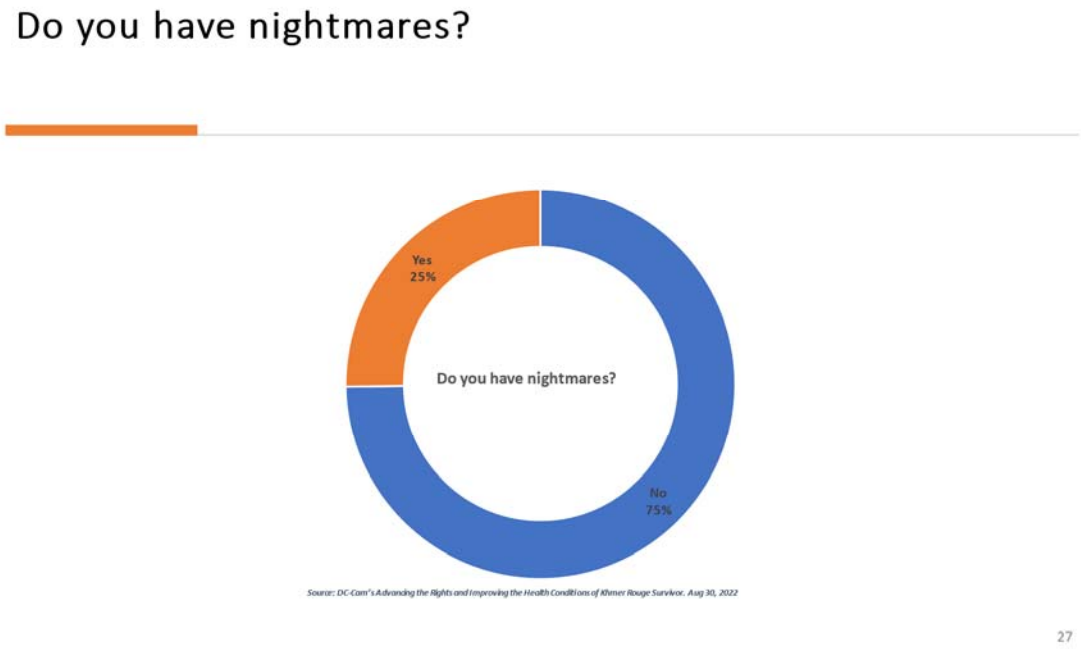

Figure 26: Memories of survivors.

In response to the question, "Are you still haunted by what you experienced at the hands of the Khmer Rouge", 87 percent of responded stated "yes", and the remaining (13 percent) stated "no."

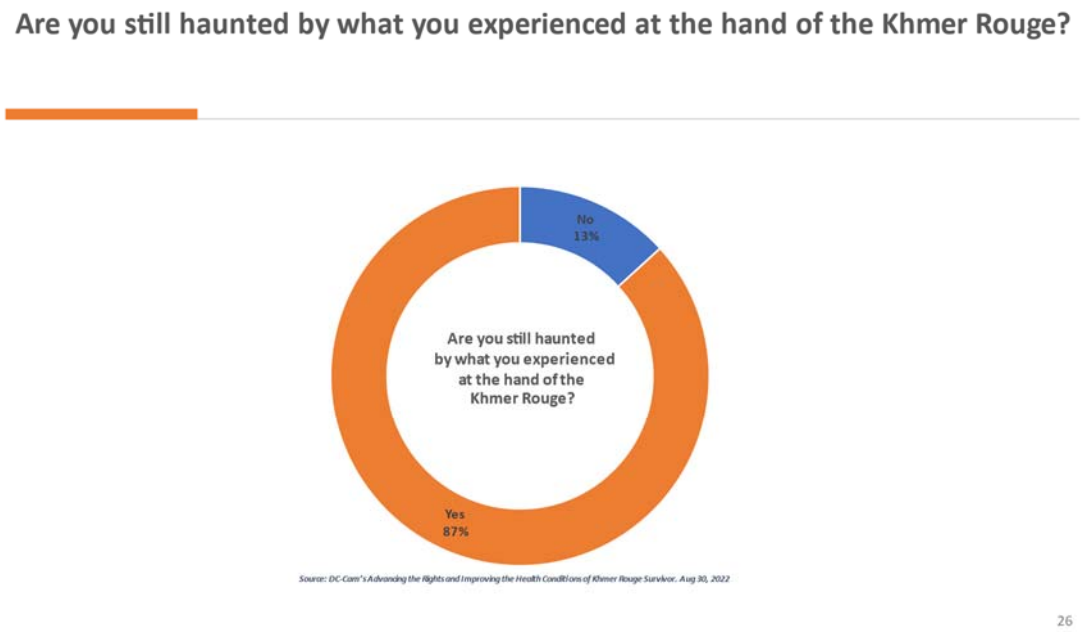

Figure 27: Memories of survivors

V. Key Findings

1) Cambodian survivors predominantly identify as poor, unemployed or employed in occupations of relatively low wages (particularly agriculture).[35]

2) Women represented a higher percentage of the respondents across all age groups.[36]

3) Cambodian survivors predominantly attributed any illness, disease, or ailment they are suffering to old age.[37]

4) Survivor communities appear to be concentrated in the Tonle Sap Lake and Plains regions of Cambodia.[38]

5) Hypertension, gastrointestinal disorders, and mental illness stood out as the most reported, potential health conditions that could have been directly or indirectly associated with life under the Khmer Rouge regime.[39]

6) A notable percentage of survivors (at least 1 out of 4 respondents in this study) are reported to still suffer from some type of mental health condition or symptom that can be attributed to experiences under the Khmer Rouge.[40]

7) Medication, as opposed to visits to a public or private healthcare provider or hospital, is the primary method used for treatment by survivors in lingering or unexpected medical care needs.[41]

8) The majority of survivors received a COVID-19 vaccination; however, the fact that the older the generation of survivors, the reduced likelihood they received a vaccine raises an untested hypothesis that the older the generation the greater the challenge in providing new information, medicine or treatment.[42]

[35] *See* Figures 8-10 and relevant commentary.

[36] *See* Figure 4 and 7 and relevant commentary.

[37] *See* Figure 15 and relevant commentary.

[38] *See* Figure 2 and relevant commentary.

[39] *See* Figures 13 and 14 and relevant commentary.

[40] *See* Figures 25-27 and relevant commentary.

[41] *See* Figure 16 and relevant commentary.

[42] *See* Figures 22-24 and relevant commentary.

VI. Recommendations

1) Actions, policies, or programmes aimed at addressing or offsetting cost of medical care for survivors should be explored for purposes of improving survivors' access to medical care.[43]

Discussion: Inspired by the "Pentagonal Strategy" of the new Cambodian Prime Minister Samdech Moha Borvor Thipadei Hun Manet and the public health strategy of recently appointed Cambodian Minister of Health, the Honorable, Chheang Ra, DC-Cam sees addressing or offsetting the cost of medical care for survivors as critical for *proving* Cambodia's rapid development is balanced with a prioritization of the people at the grassroots level. Healthcare is one of the greatest priorities and needs of Cambodia's "Greatest Generation"—i.e., the survivors of the Khmer Rouge era—and to this end, DC-Cam is committed to exploring ways to address or offset the cost of medical care for survivors. Recommendations **2** and **4** below complement Recommendation **1** as potential ways and means to this end. DC-Cam looks forward to supporting these national-level objectives through additional research, education, and direct action programmes aimed at addressing or offsetting the cost of medical care for survivors.

2) Actions, policies, or programmes aimed at addressing or supporting the *support networks* of impoverished or otherwise marginalized survivors will also improve survivors' access to care for these remote and/or marginalized populations.[44]

Discussion: This recommendation complements recommendation **1** and **4**. Inspired by the Honorable, Chheang Ra's commitment to improving communication with local people, DC-Cam sees actions, policies, or programmes aimed at addressing or supporting the systems and networks of survivors as critical to improving survivors' access to care, particularly in these remote and/or marginalized populations. It is assumed that survivors in remote or marginalized populations have a greater reliance on their local resources as opposed to survivors in urban areas such as Phnom Penh; however, this assumption requires further research on the comparative advantages between urban and rural populations of survivors. Notwithstanding the presumed differences between urban and rural populations, all survivors' access to care must be analyzed through the prism of accessibility of public and private health providers and clinics, as well as availability of families, friends, and the community to provide support. When local resources, systems, or networks are deficient or lacking, survivors are predisposed to use whatever is available to diagnose and deal with pain or other symptoms. Based on the preliminary data of this study, medication appears to have become the predominant way to address challenges with access to care and services, but medicine may not be the optimal means for treatment of a physical or mental health condition. Providing support to the primary caregivers of survivors may be a cost-effective way to improve the health and welfare of survivors, and if this support is limited to education and training, the costs for administration should be minimal in comparison to other means and modes of improving survivors' health care. DC-Cam looks forward to supporting national- and local-level initiatives that improve systems and networks either directly or indirectly through research, education, and direct action programmes.

[43] *See* Figures 9-10; 19-21 and relevant commentary.

[44] *See* Figures 9-10; 16-17; 19-21 and relevant commentary.

3) Because women represented a higher percentage of the respondents across all age groups, there may be a potential need for greater attention to sex- and gender-sensitive care, resources, and support services for survivors.[45]

Discussion: Although there is much to be learned about how much gender impacts access to healthcare, there is no question that gender affects access to healthcare, social dynamics, health behaviors, and the environment survivors work within to utilize services and support. This study did not explore gender as a variable, but the disproportionate representation of female survivors in the study suggests there is a higher percentage of women than men survivors nation-wide, and this circumstance may have an impact on access to and quality of care and resources received. Because women appear to represent a majority of survivors in Cambodia, DC-Cam recommends greater research, actions, and policies for health care that take gender into account.

4) There is a need for greater attention to information, services, and resources that support healthy behaviors and routines among survivors.[46]

Discussion: This recommendation complements recommendation **1** and **2**. In Cambodia, public health education is low, particularly in remote communities. The fact that Cambodian survivors predominantly attributed their illness, disease, or ailment to old age suggests survivors are more predisposed to assume their symptoms and conditions are associated with natural ailments associated with aging, rather than trauma based on war and genocide. This assertion requires further research and likely should be moderated by pre-existing studies. The majority of evidence suggests exposure to war and other traumatic events continue to have negative impacts on health across the life course.[47] Health education would be the most impactful and least costly means for directly improving health and welfare of survivors, and such health education can be complemented by further research that explores the effects of the Khmer Rouge period on the particular illnesses, diseases, and ailments of survivors.

5) Future direct action or research programmes targeting survivor communities can target the Tonle Sap Lake and Plains regions of Cambodia; although, other areas of Cambodia, such as the Anlong Veng region, present possibilities for further research.[48]

Discussion: DC-Cam's work in mapping survivor communities offers insight into how to best direct future research, actions, and policies that target this generation. Using these maps can provide insight into more geographically focused policies, actions, and programs that improve access to care.

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[45] *See* Figures 4 and 7 and relevant commentary; *See generally* Sabine Oertelt-Prigione, "Putting Gender into Sex- and Gender-Sensitive Medicine," EClinical Medicine, (March 2020), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7152822/.

[46] *See* Figure 15; 22-24 and relevant commentary.

[47] *See* Zachary Zimmer, et al., "War Across the Life Course: Examining the Impact of Exposure to Conflict on a Comprehensive Inventory of Health Measures in an Aging Vietnamese Population," INT. J. EPEDIMIOLOGY 866-879 (January 4, 2021) available at https://pubmed.ncbi.nlm.nih.gov/33395485.

[48] *See* Figure 2 and relevant commentary.

6) There is a need for greater attention to information, services, and resources that support mental health among survivors and their families.[49]

Discussion: Because a notable percentage of survivors still suffer from some type of mental health condition or symptom that can be attributed to experiences under the Khmer Rouge, there is a need for greater attention to information, services, and resources that support mental health among survivors and their families. As described in the commentary of Figure 24, there is a significant need for research on the impact of atrocity crimes on mental health, as most studies of the survivors of atrocity crimes are largely observational and lacking in epidemiological rigor. Notwithstanding this circumstance, it seems like an irrefutable fact that individuals who experience atrocity crimes can be said to have experienced stressors that will make them more likely to suffer from mental health problems than individuals who have not had such experiences. The impact of genocide leaves lifelong scars on survivors and, potentially, their offspring, and DC-Cam looks forward to supporting initiatives that research or aim to improve mental health of the survivors and their families.

[49] *See* Figures 25-27 and relevant commentary.

VII. Conclusion

Access to medical care can be conceptualized in different ways—from the distribution of medical services, resources, and facilities to the external characteristics of a population, such as in insurance coverage, attitudes to and understanding of medical care, and income. It is possible that improving access, and consequently improving the health and welfare of survivors of atrocity crimes, may be less a matter of addressing the financial circumstances of survivors, and more a question about how to make medical care more convenient, trusted, and reliable—not only for survivors but also their support network, i.e., family members and community. Convenience, trust, and reliability can be shaped from multiple angles and dimensions—from interventions that target the convenience of connecting survivors to medical care and services, to public health education, and resources and support for the systems and networks (including families) that survivors rely upon in their daily lives. The health and welfare of survivors has to be conceptualized from the bottom-up as much as the top-down, and from all the stakeholders who play a part in health and welfare, for meaningful change to be systematic, progressive, and sustainable.

DC-Cam's research in this area is ongoing because DC-Cam continues to receive new survey and observational data under this project. For these reasons, these findings remain preliminary in nature; however, they raise many questions and implications that bear significant relevance for ongoing and potential future work with the survivor community in Cambodia and in other post-conflict countries.

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