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THE 48 USES OF DRAGON'S BLOOD

Mythology is rich with tales of dragons and the magical properties their innards possess. One of the most valuable bits was their blood. Barney Bishop and Monique van Hoek, at George Mason University in Virginia, report in *The Journal of* Proteome Research that the blood of the Komodo dragon loaded with compounds that could be used as antibiotics. Komodo dragons carry simple proteins known as antimicrobial peptides (AMPs) as general purpose weapons against infection. But if the AMPs of Komodo dragons are potent enough to let them shrug off otherwise fatal bites from their fellow animals, they are probably especially robust. And that could make them a promising source of chemicals upon which to base new antibiotics.





ALSO IN THIS ISSUE:

China's Rejuvenation in Health Australia Considers Childcare Ban on Unvaccinated Children

As HIV Soars in Philippines, Conservatives Kill

Environment Report Rings Serious Alarm Bells Baltimore Uses Sustainable Development Goals to

Kenyan Office Predicts Rain to Fail

FYI#1: NEW BOOK: Humanity's Ten Greatest **Challenges and How We Can Overcome Them**

FYI#2: Mountain Snowpack Melts Slowly

FYI#3: Cathay Pacific to Cut Emissions With Biofuel 8

FYI#4: Woodstoves Are Good and Bad

FYI#6: The Do Gooder's Dilemma

Backpage: Winning Student Research Poster

5

School Condom Plan

Welcome to the Post-Human Rights World **Lower Fuel-Economy Rules Don't Create Jobs** Indigenous 'People of Wildlife' Protect Nature

Quote of the Week and Events

Short Review of Book: Earth As a 'Toxic Planet'

9

10 FYI#5: The Map of the World By Noise Pollution

11

UN EXPERTS DENOUNCE 'MYTH' PESTICIDES ARE NECESSARY TO FEED THE WORLD

The idea that pesticides are essential to feed a fast growing global population is a myth. A new report that was presented to the UN human rights council is severely critical of the global corporations that manufacture pesticides, accusing them of the systematic denial of harms, aggressive, unethical marketing tactics and heavy lobbying of governments which has obstructed reforms and paralysed global pesticide restrictions. The report says pesticides have catastrophic impacts on the environment, human health and society as a whole, including an estimated 200,000 deaths a year from acute poisoning. "It is a myth," said Hilal Elver, the UN's special rapporteur on the right to food. "Using more pesticides has nothing to do with getting rid of hunger. Elver said many of the pesticides are used on commodity crops, such as palm oil and soy, not the food needed by the world's hungry people: "The corporations are not dealing with world hunger, they are dealing with more agricultural activity on large scales."

Read More on The Guardian



PLANETARY HEALTH WEEKLY





China's Rejuvenation in Health

China's governance of health, is fiercely complex. Its Premier Li Keqiang presides over 35 Council members, including the heads of 25 ministries. The Ministry of Health in China is known as the National Health and Family Planning Commission (NHFPC). At a recent policy gathering, Li Keqiang emphasised the significance of "medium high speed economic growth" (projected to be around 6.5% in 2017) to boost health care. This follows last year's announcement by Xi Jinping of Healthy China 2030, a far reaching plan to make health the overriding goal of economic growth and political reform. Healthy China 2030 will include proposals for upgrading hospital treatment and management, universal health coverage, improvements in the supply of essential medicines, a revitalisation of traditional Chinese medicine, enhanced health literacy, and stronger disease prevention, all in the context of increasing industrialisation, urbanisation, and an ageing population. China's Government has made health a foundation for its development. These reforms are part of what China's political leaders see as the country's great rejuvenation.

Read More on The Lancet

Australia Considers Childcare Ban on Unvaccinated Children

Unvaccinated children would be banned from childcare centres and preschools under an Australian government plan. Some Australian states already have "no jab, no play" laws, but PM Malcolm Turnbull is calling for nationwide legislation. Health groups have supported the push, arguing parents and the community have an obligation to protect children. An Australian Child Health Poll survey of nearly 2,000 parents showed 5% of children were not fully vaccinated. Mr Turnbull said more needed to be done, citing the case of a baby who died from whooping cough. Vaccinating children is not a legal requirement in Australia, but failing to do so makes parents ineligible for childcare rebates. The so-called "anti-vax" movement believes vaccinations may cause medical conditions such as autism, but overwhelming scientific research suggests this is not the case. The "herd immunity" is an important part of public health programmes. It stops the spread of disease by preventing an infection from moving among most people, the ones who have been vaccinated. And so it protects those few without the vaccine. But as the numbers of those without protection rises, so to does the risk to each of them.



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As HIV Soars in Philippines, Conservatives Kill School Condom Plan

Jhay-ar Tumala remembers sitting in a pew in Manila's Quiapo Church, holding a sealed envelope with his HIV test results, and praying. He was 19 and had been having sex since he was 15. The envelope contained bad news. His story is not unusual, and that may also mean bad news for the Philippines. Right now, the Philippines runs the risk of letting the infection get out of control. Among young people most at risk for HIV, the rates of new infections has increased 230 percent between 2011 and 2015. But the Philippines has been stymied in its efforts to raise awareness about the disease and to arrive at an effective strategy for preventing it among young people. The Philippine Department of Education announced that it would scrap a plan developed by the Health Department to distribute condoms to juniors and seniors in public high schools. The plan would have trained teachers to counsel students on how to prevent pregnancies and sexually transmitted infections, and to offer voluntary HIV testing.

Read More on New York Times

PAGE | 2 Volume 3, No. 14

PLANETARY HEALTH WEEKLY





State of the Environment Report Rings Serious Alarm Bells, And We're to Blame

The Australian Conservation Foundation said a 400 per cent uplift in investment in the natural capital was needed to restore the damage of their environment, A report singled out the built environment and economic activity as the greatest cause of damage. Worst impact was "principally in populated coastal areas and some of the growth areas within urban environments, where human pressure is greatest (particularly in south eastern Australia); and the extensive land-use zone of Australia, where grazing is considered a major threat to biodiversity". The worse were the impacts from coal mining and the coal-seam gas industry, habitat fragmentation and degradation, invasive species, litter in the coastal and marine environments, and greater traffic volumes in capital cities. A degraded state of the environment impacts on Australia's economic growth. Read More on The Fifth Estate

How Baltimore Is Using the Sustainable Development Goals to Make a More Just City

Academics and advocates in Baltimore are seeking to use the new global Sustainable Development Goals (SDGs), of which the United States is a signatory, as leverage to create stronger systems of accountability in the city. Over the past year and a half, an initiative called the USA Sustainable Cities Initiative, Baltimore has worked under the umbrella of the University of Baltimore, with guidance from a national UN affiliated group. The new recommendations focus on looking for ways to regularly push data into the centre of ongoing debates about urban development, to inform citizens, empower community groups and, ultimately, guide public policy and investments. The framework's focus on access to justice has garnered attention across the United States and internationally. But it found particular resonance in Baltimore. The city has emerged as an early and a notable case study in the international effort to "localize" the SDG's to make a high minded global framework deeply relevant at the local level.

Read More on Citiscope







Kenyan Met Office Predicts Rains to Fail Sparking Crisis Worse Than 2011

The Kenyan Met Office warned that the current drought will surpass the disastrous event of 2011, with rains predicted to fail across much of the country during the next three months. 3.7 million people are estimated to be affected; president Uhuru Kenyatta declared a national emergency. This number is expected to rise to four million people by April, surpassing any drought event since the turn of the century. "For the areas that are highly impacted by this drought, for the forecast of March to May, we can see depressed rainfall on these parts of the country. So we expect that this drought is going to worsen going forward," Joyce Kimutai, climate scientist at the Kenya Meteorological Department told a gathering of government and international aid representatives. In order to reduce future impacts of climate change, disaster management and agriculture planning remain a priority to the Kenyan government.

Read More on Climate Change News

PAGE | 4 Volume 3, No. 14

PLANETARY HEALTH WEEKLY





Welcome to the Post Human Rights World

Geopolitical realignments and the rise of populist nationalism have unleashed a global backlash against human rights. President Donald Trump is already shaping up as a disaster for human rights. Kenneth Roth, the executive director of Human Rights Watch, has written that Trump's election has brought the world to "the verge of darkness" and threatens to "reverse the accomplishments of the modern human rights movement." The rise of Trump has only underlined the existential challenges already facing the global rights project. With populism sweeping the world and new superpowers in the ascendant, post Westphalian visions of a shared global order are giving way to an era of resurgent sovereignty. Unchecked globalization and liberal internationalism are giving way to a post human rights world. In a time of increasing instability, in which the promised fruits of globalization have failed for many to materialize, the current "age of anger," human rights have become both a direct target of surging right wing populism and the collateral damage of its broader attack on globalization, international institutions, and "unaccountable" global elites.

Read More on Foreign Policy

SPOTLIGHT ON POLICY:

Ignoring Politicians: Lower Fuel Economy Rules Don't Create Jobs

A common refrain among critics of current and future fuel economy standards is that the need to comply with them produces job cuts in the auto industry. In the hometown of the Big Three U.S. automakers, Trump discussed plans to end what he termed the government "assault" on the auto industry. He painted regulations as a major cause of job losses in the auto industry, along with what he views as automakers' over eagerness to build cars for sale in the U.S. outside the country. Trump directed the EPA to reopen the midterm review of proposed fuel economy rules for 2022 through 2025 model year cars that it had ended more than a year early when it finalized those standards in the last days of the Obama administration. But there is no hard evidence that fuel economy standards are "job killers," argues a recent Yale School of Forestry & Environmental Studies blog post. Over the five year phase-in leading up to the final 2025 fuel economy target, the incremental cost of compliance per vehicle will average \$240.

Read Green Car Reports





SPOTLIGHT ON INDIGENOUS HEALTH:

The Indigenous 'People of Wildlife' Know How To Protect Nature

In the northern part of Mount Kenya, there is an indigenous community, the Il Lakipiak Maasai ("People of Wildlife"), which owns and operates the only community owned rhino sanctuary in the country. They have managed to alleviate the human wildlife conflicts that arise in the area due to the intrusion of wild animals searching for water, prey and pasture during drought. They achieved this by reducing bush cutting to ensure more fodder for wildlife on their lands. Through this conservation strategy, indigenous peoples have demonstrated that they can coexist harmoniously with wildlife while supporting their own pastoral lives and cultures. Earth's original peoples have faced hard challenges, yet they managed to survive and conserve their natural environment. They still do so in spite of modern humans who have been systematically abusing their rights, stripping their lands, confining them to reserves, and disdain their ancestral cultures and knowledge. Actively involving indigenous peoples in wildlife conservation is key to maintaining biodiversity and ensuring sustainable rural livelihoods. The cultures of indigenous peoples involve the stewardship of wildlife. They simply cannot imagine their life divorced from nature and their interest in the sustainable use of resources is strong.

Read More on IPS News Agency





QUOTE OF THE WEEK

"As to climate change, I think the president was fairly straightforward: We're not spending money on that anymore," Mr. Mulvaney, director of the White House Office of Management and Budget, said at a White House briefing on March 21.

"The message they are sending to the rest of the world is that they don't believe climate change is serious. It's shocking to see such a degree of ignorance from the United States," said Mario J. Molina, a Nobel Prize winning scientist from Mexico who advises nations on climate change policy.

EVENTSTABLE

	DATE	CONFERENCE	LOCATION	REGISTER
	April	2017 Annual CUGH Global Health Conference	Washington	http://www.cugh.org/events/2017-annual-
	6-9		USA	cugh-global-health-conference
	April	Global Health & Innovation Conference	New Haven	http://www.uniteforsight.org/conference/
	22-23		USA	
	May	World Health Summit of the M8 Alliance	Montreal	https://www.worldhealthsummit.org/
	8-9		Canada	regional-meeting.html
	June 1-2	Aboriginal Conferences	Canada	http://aboriginalconferences.ca/
	June	McGill Summer Institute in Infectious Disease and Montreal		
	12-23	Global Health	Canada	http://mcgill-idgh.ca/
	June 16-18	North American Refugee Health Conference	Toronto Canada	http://www.northamericanrefugeehealth.com/agenda

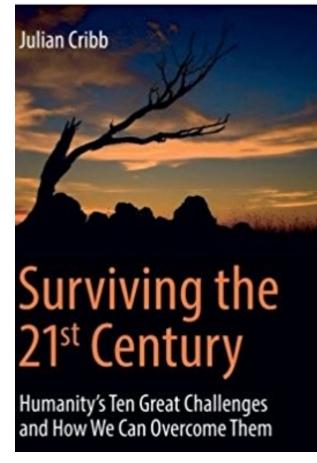
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NEW BOOK: SURVIVING THE 21ST CENTURY HUMANITY'S TEN GREAT CHALLENGES AND HOW WE CAN OVERCOME THEM

The book explores the central question facing humanity today: how can we best survive the ten great existential challenges that are now coming together to confront us? Besides describing these challenges from the latest scientific perspectives, it also outlines and integrates the solutions, both at global and individual level and concludes optimistically. This book brings together in one easy-to-read work the principal issues facing humanity. It is written for the two next generations who will have to deal with the compounding risks they inherit, and which flow from overpopulation, resource pressures and human nature. Read More on Springer

SHORT REVIEW OF BOOK: SCIENTISTS CATEGORIZE EARTH AS A 'TOXIC PLANET'



The earth, and its inhabitants, are being "saturated" with man-made chemicals on an unprecedented scale, according to Julian Cribb, author of *Surviving the 21st Century*. He writes that we're being exposed to thousands of these chemicals when we breathe, eat, drink, travel, get dressed and, well, live, basically. Cribb warns that this is having a massive impact on humans, but is barely regulated or understood. He writes that roughly 2,000 new chemicals are released every year, and most have never been tested for how safe they are for humans. It's less surprising, then, that one in four people die from diseases caused by air, water and soil pollution, chemical exposures, climate change and ultra violet radiation. The one common factor here? They all result from human activity.

Cribb writes, "Each moment of our lives, from conception unto death, we are exposed to thousands of substances, some deadly in even tiny doses and most of them unknown in their effects on our health and wellbeing or upon the natural world." Cribb warns that industrial toxins are found in new-born babies, in mother's milk and in the food chain and drinking water around the world.

Read More on Indy 100



PAGE | 10 Volume 3, No. 14



MOUNTAIN SNOWPACK MELT MORE SLOWLY IN WARMING WORLD



As the world warms, mountain snowpack will not only melt earlier, it will also melt more slowly, according to a new study by scientists at the National Center for Atmospheric Research (NCAR). The counterintuitive finding could have widespread implications for water supplies, ecosystem health, and flood risk.

The counterintuitive finding, published in *Nature Climate Change*, could have widespread implications for water supplies, ecosystem health, and flood risk. When snowmelt shifts earlier in the year, the snow is no longer melting under the high sun angles of late spring and early summer," said NCAR postdoctoral researcher Keith Musselman, lead author of the paper. "The Sun just isn't providing enough energy at that time of year to drive high snowmelt rates."

Findings could explain recent research that suggests the average streamflow in watersheds encompassing snowy mountains may decline as the climate warms, even if the total amount of precipitation in the watershed remains unchanged. That's because the snowmelt rate can directly affect streamflow. When snowpack melts more slowly, the resulting water lingers in the soil, giving plants more opportunity to take up the moisture. Water absorbed by plants is water that doesn't make it into the stream, potentially reducing flows.

Musselman wondered if the same phenomenon would unfold in a future climate, when warmer temperatures are expected to transform higher elevation snowpack into something that looks much more like today's lower elevation snowpack. If so, the result would be more snow melting slowly and less snow melting quickly. "We found a decrease in the total volume of meltwater, which makes sense given that we expect there to be less snow overall in the future," Musselman said. "But even with this decrease, we found an increase in the amount of water produced at low melt rates and, on the flip side, a decrease in the amount of water produced at high melt rates."

Changes in the timing and amount of snowmelt runoff could also cause warmer stream temperatures, which would affect trout and other fish species, and the expected decrease in streamflow could cause shortages in urban water supplies. "We hope this study motivates scientists from many other disciplines to dig into our research so we can better understand the vast implications of this projected shift in hydrologic patterns." Musselman said.

Read More on Homeland Security News Wire

PAGE | 6 Volume 3, No. 14



CATHAY PACIFIC TO CUT EMISSIONS WITH SWITCH TO BIOFUEL



Hong Kong flag carrier Cathay Pacific will switch to biofuels made from landfill rubbish on select long haul flights, reports said Tuesday, in an effort to cut harmful emissions. Cathay flights to Hong Kong from the US, where the new fuel is produced, will use a combination of conventional jet fuel and biofuels starting in 2019. The airline hopes to cut emissions on those flights by 80 percent. "Aviation biofuels will play a key role for Cathay and the aviation industry's quest for lower emissions," Cathay Pacific biofuel manager Jeff Ovens told the Post.

"These fuels will have a lower carbon footprint than fossil fuels, and the pricing we have is competitive with traditional fuels," Ovens said.

In 2015, China's Hainan Airlines flew from Shanghai to Beijing in the country's first commercial flight using biofuel made from cooking oil. The Boeing 737 plane used a 50-50 mix of conventional jet fuel and biofuel made from waste cooking oil collected from restaurants in China. Australia's Qantas and Air Canada have both tested biofuel on commercial flights.

Read More on Biofuel Daily



The risk of acute myocardial infarction for the elderly living in and around small cities is increased by air pollution caused by biomass burning from woodstoves. It is well documented that air pollution in big cities causes heart and lung problems. But what are its consequences on people in smaller urban centres?

By comparing pollution data from three cities in British Columbia (Prince George, Kamloops and Courtenay/Comox) with hospital admissions, researchers from McGill and Health Canada found that rising concentrations of fine particulate air pollution caused by wood burning were associated with increased hospitalization for myocardial infarction. During the cold season, when pollution from woodstoves is at its highest, the risk of heart attacks among subjects of 65 years and older increased by 19%.

"We noticed that the association was stronger when more of the air pollution came from wood burning, says McGill University professor Scott Weichenthal, lead author of a new study published in *Epidemiology*. This suggests that the source of pollution matters and that all particulate air pollution is perhaps not equally harmful when it comes to cardiovascular disease." Scott Weichenthal thinks the findings might push cities across Canada to tackle air pollution caused by fireplaces and woodstoves. Increasing winter smog alerts have prompted cities such as Montreal to bring forward bylaws forcing homeowners to register and, eventually, replace their stoves with cleaner sources of heating. The study, says Weichenthal, gives credence to "initiatives aimed at reducing air pollution from residential wood burning in the interest of public health."

Read More on Science Daily

PAGE | 8 Volume 3, No. 14



The noise of the city, police sirens, train announcements and the constant drone of cars, can often be drowned out by listening to some calm music. Or, people simply get used to it.

German researchers collected information from over 200,000 hearing tests worldwide. Dubbed the 'Mimi data', they investigated a possible correlation between living in a city and premature hearing loss using the Mimi app. They calculated participants' hearing age, and found a 64 per cent positive correlation with noise pollution levels in the cities. This implied that hearing loss may be directly or indirectly attributed to living in cities with especially high noise pollution.

Top ten most noise polluted cities:

- 1. Guangzhou, China
- 2. Delhi, India
- 3. Cairo, Egypt
- 4. Mumbai, India
- 5. Istanbul, Turkey
- 6. Beijing, China
- 7. Barcelona, Spain
- 8. Mexico City, Mexico
- 9. Paris, France
- 10. Buenos Aires, Argentina Read More on Indy 100

Top ten least polluted cities:

- 1. Zurich. Switzerland
- 2. Vienna, Australia
- 3. Oslo, Norway
- 4. Munich, Germany
- 5. Stockholm, Sweden
- 6. Dusseldorf, Germany
- 7. Hamburg, Germany
- 8. Portland, US
- 9. Cologne, Germany
- 10. Amsterdam, Netherlands



Ben Peacock, Republic of Everyone

Last night I watched a Louis Theroux. Not just any Louis Theroux, the last one. You see, I've been working my way through them one by one and I left this one last for a reason. It was about wildlife hunting in Africa, the story of people who pay to shoot a wild animal that is fenced into a field. And I simply didn't want to see animals killed for fun. But now, here it was, the last one in the whole set, avoidable no more. So I watched it, and it went something like this.

Louis spoke to the hunters, almost exclusively Americans who pay to kill. They go to Africa with a list of animals they want to shoot and shoot what they can afford. I found no way to reconcile with these people. Killing for fun is wrong and these people are my enemy. Then Louis spoke to the hosts, the game park people who fence in the animals and offer them up to be shot, each at a price, wildebeest \$700, crocodile \$6500, lion \$20,000, and so on. They're South African bushmen, rough and practical. Selling death to bidders. Yet when they spoke I found words I could understand. Most of them had started as farmers (and one as a vet). They told of previous destruction of the land by cattle and contrasted that to the natural landscape that the animals now ran on. They told the tale of how poaching had annihilated wild animals from neighbouring Zimbabwe and threatened to do so in national parks all across Africa. Governments were simply too corrupt or too poor to police them properly. They told how, by allowing 10 per cent of the animals to be killed each year, they are able to create a wildlife farm where the other 90 per cent is safe and wild. How killing breeds life. How the problem of hunting is the answer to wildlife destruction. It sat uncomfortably with me, yet it's hard not to think that there is a certain poetry in an imperfect answer for an imperfect world.

And here in lies the dilemma. If I asked you, "is it okay for people to fence in animals and sell their death for sport", you'd say no. If I said that sacrificing the 10 per cent would create a sustainable future for the 90 per cent, you may not instantly agree – but the conversation changes. It's a debate I've heard many times when discussing the concept of shared value too. The idea of profiting from doing good sits awkwardly. Shouldn't making the world better be something we just do, for our own good if nothing else?

I wish we lived in a different world with a different way of doing business, but we don't. Shared value is an answer for the system we live in, profit makes an idea scaleable and replicable and that makes it sustainable.

Read More on the Fifth Estate

MATERNAL HEALTH: A COMPARATIVE STUDY OF GHANAIAN-CANADIAN IMMIGRANT BIRTHING EXPERIENCES





By Reinholdine Olympio, BA Supervised by Prof. David Zakus School of Occupational and Public Health, Ryerson University

Ryerson University

Research Question

What are the birth related differences experienced by women who have given birth in Ghana and Canada?

INTRODUCTION

- The WHO (2016) defines maternal health as "the health of women during pregnancy, childbirth and the postpartum period".
- Maternal health matters because it impacts the survival chances of both the mother and her baby.
- Globally maternal mortality has reduced by 44% between 1990 and 2015.
- About 830 women die every day from pregnancy and childbirth related complications.
- 99% of these deaths occur in developing countries
- Maternal mortality rate in Canada is 11 per 100,000 live births compared to 380 deaths per 100,000 live births in Ghana

OBJECTIVE

To compare women's birthing experiences between Ghana and Canada

METHODS

Recruitment of 8 women was through advertisements (flyers at churches & community centers)

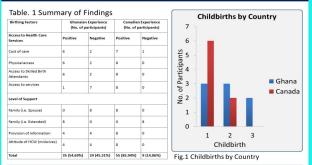
Data Collection:

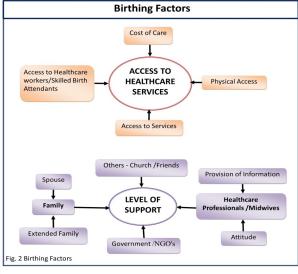
Inclusion criteria:

- One-on-one semi-structured interviews.
- Ghanaian immigrant women who are 18 years of age or older.
- Fluent in English, Twi, or Fanti.
- Have given birth in both Ghana and Canada.
- Currently reside in Toronto.

Analysis: All transcripts were coded by research student and checked with the supervisor.

RESULTS





DISCUSSION

- Two main themes were identified: access to healthcare services and level of support.
- The women reported some similarities (e.g. cost of care) and differences (e.g. familial support) in their experiences in both countries
- Cost of care was not a concern for participants in both countries likely because they both have free health care systems.
- Physical /facility access to services was an issue in Ghana likely because there are fewer local hospitals and clinics available in Ghana compared to Canada
- Physical access to healthcare facilities in Ghana varied depending on regional location.
- Familial support was different in Canada and Ghana and could be explained by cultural differences and behaviors.
- Less satisfaction with healthcare professionals' behavior in Ghana consistent with literature findings.

CONCLUSION

- The women also reported both positive and negative experiences in Ghana and Canada, however their positive experiences in Canada were more than that of Ghana.
- Increasing access to extended family support in Canada will facilitate a more positive experiences for Canadian immigrant women
- Maternal health care services can be enhanced in Ghana through the provision of travel alternatives to hospitals.

LIMITATIONS

- The study result cannot be generalized due to its qualitative nature
- Most of the participant experiences in Ghana were 20 years ago.
- Interview guide did not inquire about other factors that could have contributed to their experiences such as socio-economic status

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People's Choice Winning Poster (Undergraduate) Student Research Day School of Occupational and Public Health, Faculty of Community Services Ryerson University, Toronto

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