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UCT research could help identify remains of missing children

University of Cape Town research involving the major joints of the human body in South African children has revealed information that could ultimately help in identifying the remains of missing children.

In her PhD research, Dr Kavita Lakha looked at the age of union of the epiphyses of the major joints of the human body in South African children. Her aim was to develop a standard which would determine the age of a child through low dose X-rays. The study can also be applied to forensic cases involving dry bone.

Lakha said: "We are able to estimate the age of the child through the bones we find. Setting the South African standards for the age determination is a new finding from my research."

Lakha's doctoral thesis was motivated through her work at the National Prosecuting Authority, where she is a special investigator in the Missing Persons Task Team dealing with Truth and Reconciliation (TRC) cases. She said her research was tailored towards South Africans and would help in investigations of unknown children whose bodies were severely decomposed.

The UCT PhD graduate said she had been working on the research for six years as she felt so strongly about finding closure for family members whose children had gone missing. "Closure is very important. When there's no body, there's always uncertainty. While tragic to lose a child, it's devastating not to find their remains. Finding and identifying remains or a body brings closure and family members are able to mourn their loss," said Lakha.

Her tool of analysis was the LODOX statscan system, which emits low-dose radiation and provides a complete body scan in 13 seconds. The results of Lakha's study show that there are no significant differences between the state of bone maturation in children of different South African biological and socio-economic groups.

Lakha said it was important to develop standards that determine age in South Africa, as children from different countries mature at different ages.

"There is a general awareness that South African children mature more slowly. If you use standards developed on American children, they tend to overestimate the age of South African children. This is why it's important to develop standards for our country."

Through her research, Lakha says she's able to determine close to the exact age of children and young people right up until their early twenties, as their bones are still growing and their bodies are developing.

Lakha said she had so far worked on three cases where she was able to narrow down the age of the bones very successfully. The remains were ultimately identified.

Lakha said she was trying to foster relations with various mortuaries to see how well her proposed new standards could be implemented.

Her research provides an alternative to the Greulich and Pyle (1959) method, most commonly used in South Africa.

Kavita Lakha, a recipient of the Nelson Mandela Scholarship, has a BSc and BSc Honours from the University of the Witwatersrand and an MSc from the University of Central Lancashire in London. She was awarded her PhD by UCT in December 2015. Lakha was supervised in her research by Professor Alan Morris in the Department of Human Biology at UCT.

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