

# Building a world where all mothers can give birth in a quality perinatal care system



As a volunteer examining pregnant women in Tanzania



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**Research interests**

Global health nursing



Using an app developed with midwives



Group antenatal education for pregnant women and families

**H**ave you ever asked your mother or father about what it was like when you were born? Pregnancy and childbirth are events that differ each time they occur. Each woman and each birth represent a unique story. In Japan, it is rare for women to die of pregnancy or childbirth. In Africa, on the other hand, or in Tanzania in particular, where I focus my research, mothers die from pregnancy or childbirth 100 times more likely than Japan. To prevent this tragedy, it is essential to accurately assess maternal and fetal health during antenatal care and provide information to pregnant women and their families so that they can take proper behaviors with sufficient knowledge. It is also important to develop an environment that enables midwives to care for pregnant women in a calm, compassionate manner. Moreover, it is essential for pregnant women to clearly understand what they should do, including making concrete preparations to arrive at a hospital on time, rather than merely providing women with information through one-sided communication.

To improve education for midwives, pregnant women, and their families in Tanzania, I became involved in graduate-level education and conducted research in that country. I also listened to local women and scientifically

analyzed what they had to say. I then developed an educational program based on my findings. And taking the local environments into account, it provided instructions on preparing for pregnancy and childbirth and detecting signs of danger during these events. As a result, I was able to confirm that the women and their families who had received education were better informed and prepared (knowing which health facilities to go to in an emergency, having more frequent antenatal checkups during the pregnancy, deciding in advance which family member would accompany the pregnant woman, and so on), with fewer cases of complications in mothers and newborn babies among them. Encouraged by the positive results of the educational program, I started to think about how it could be expanded nationwide, and then came up with the idea

of developing an educational app given that smartphone use had been rapidly growing in Tanzania. I collaborated with a specialized venture company, and we created an app for midwifery education and an electronic version of the mother and child health handbook to be used by pregnant women. Midwives are very happy with the new educational app and use it actively.

The World Health Organization (WHO) designated the year 2020, the 200th anniversary of Florence Nightingale's birth, as the "International Year of the Nurse and the Midwife" and organized a range of events until June 2021. As one such event, the WHO announced a list of "100 Outstanding Women Nurse and Midwife Leaders" in the world, and I was selected among them as the only Japanese on the list. This recognition of my education and research in Tanzania, which I had carried out amid many hardships while also having a lot of fun, is truly a great honor. To be worthy of this title, I hope to continue my education and research activities to support midwives all over the world.



(Left) Prof. Shimpuku hopes to expand her research to other parts of Africa, including Ethiopia, Egypt, Zambia, and Malawi, focusing on midwifery care. (Right) In this smartphone app being developed, practical information is provided with simple illustrations; for example, information on iron intake during pregnancy includes an explanation about why iron is necessary and how to take in sufficient iron.

## Research Centers

### Centers of Excellence

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- Research Center for Nitrogen Recycling Energy Carrier
- HiSENS Research Center
- Research Center for the Mathematics on Chromatin Live Dynamics
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### Chirality Research Center to elucidate the mystery of right- and left-handedness

Your right and left hands are very similar, yet they are not identical. This property is called chirality. Our research has revealed that chiral magnets made only from right-handed materials are completely different from normal magnets. It is becoming clear that problems with chiral magnets have commonalities with problems in molecule biology and high energy physics. The center is working to elucidate chirality-related problems from a basic science perspective.

