

Cancer awareness of community level health care workers in the Kilimanjaro Region, Tanzania

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Background

- Cancer is a growing burden of disease worldwide. In the region of Sub-Saharan Africa (SSA), the cancer burden is estimated to increase by 85% by the year 2030 [1].
- Treatment is already possible at three hospitals in Tanzania, but inadequate early detection contributes to late diagnosis and high mortality rates [2,3].
- Low level of cancer awareness in the population and health care workers is facilitating deficient prevention measures, screening and treatment [4].
- A pilot cancer awareness training for community level health care workers, working in rural areas in the Kilimanjaro Region in Tanzania, aimed to increase their impact on comprehensive cancer control in the country [5].
- Community level health care workers in Tanzania are **community health workers** (CHWs) who are voluntary community members with basic medical training as well as **dispensary health care workers** (DHCWs), ideally represented by nurses and medical assistants [6].
- Main research interest was to assess the effects of the training on cancer knowledge of the health care workers and their application of the new knowledge into practice.

Methods

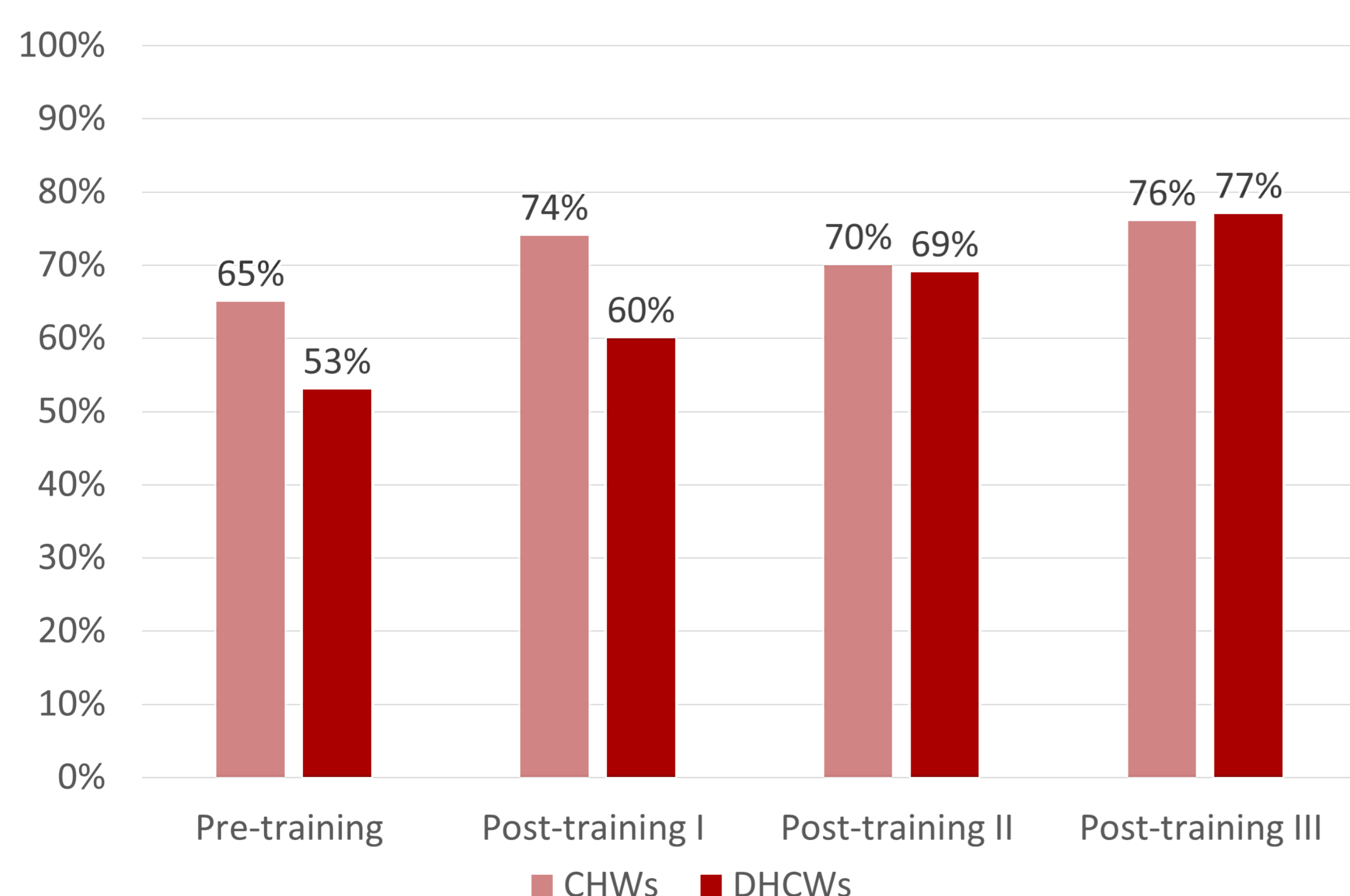
- A group of **CHWs** (n=25) and a group of **DHCWs** (n=16) attended the cancer awareness training. Three training days were provided for each group over a period of three months (one day per month).
- A questionnaire was developed to assess **cancer knowledge** in a pre-/post-training panel survey (Tab. 1). The questionnaires for the two groups were different, according to the assumed knowledge level of the health care workers.
- **Application of the new cancer knowledge into practice** was also assessed at follow-up and complemented with qualitative data.
- Analysis of the questionnaires was done by descriptive statistics. Qualitative data were analyzed by semantic thematic analysis.

Tab. 1: Survey timing

| | Time points | | | |
|---------------------------|---|---|---|---|
| | t0 Baseline | t1 Follow-up | t2 Follow-up | t3 Follow-up |
| Time of the survey | June 2018 Pre-training | June 2018 Same day as t0, Post-training | July 2018 1 month after t0, Post-training | Sept. 2018 3 months after t0, Post-training |
| Survey | Baseline and pre-training questionnaire | Post-training I questionnaire | Post-training II questionnaire | Post-training III questionnaire |

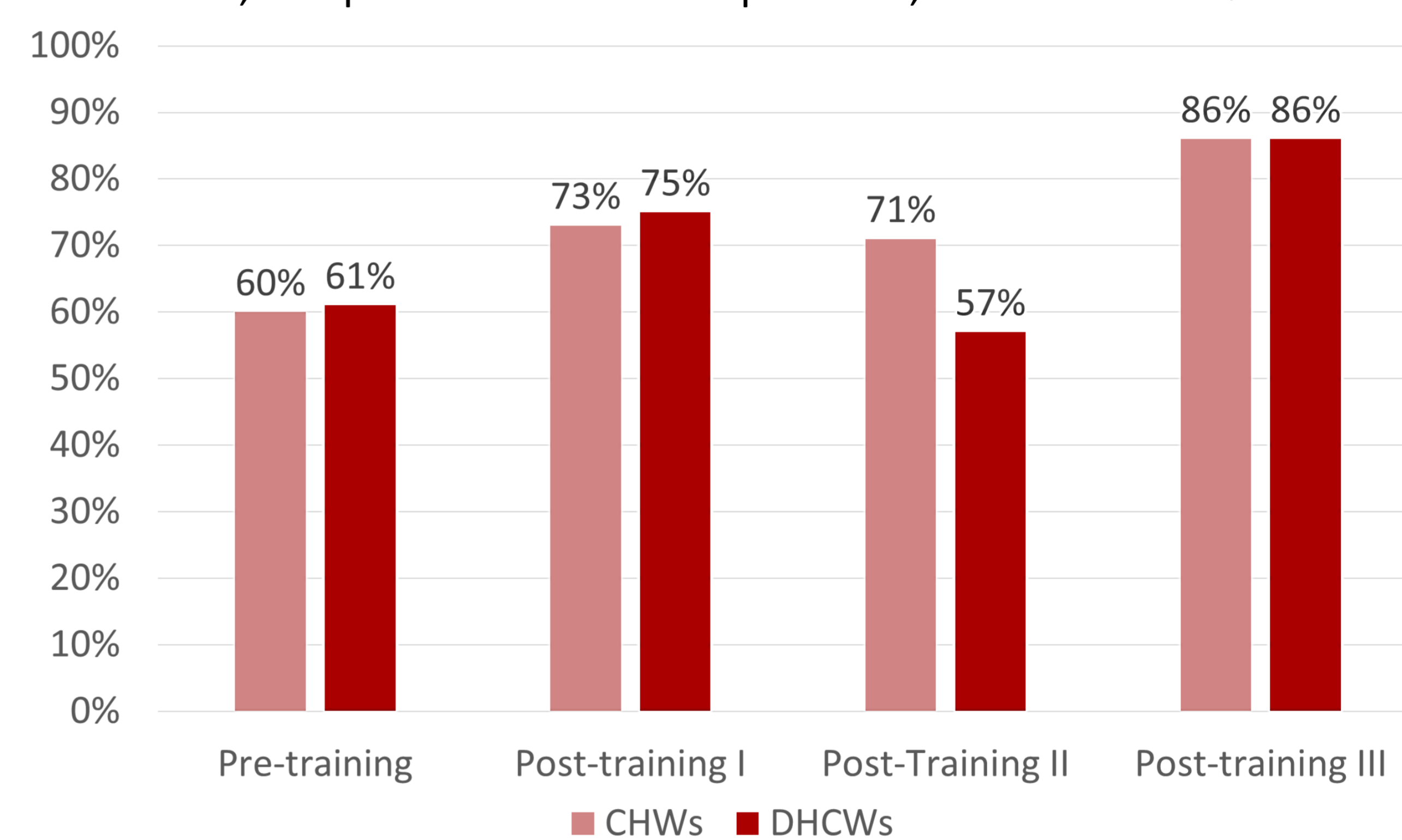
Results

Fig. 1: Cancer knowledge of CHWs and DHCWs in pre- and post-training assessment, mean scores in %



- CHWs: Cancer knowledge increased by 10% (95% CI=2-18%, p=0.015)
- DHCWs: Cancer knowledge increased by 24% (95% CI=13-36%, p=0.002)
- No remarkable difference between CHWs and DHCWs regarding cancer knowledge in pre-test assessment and increase after completing the training period in seven selected comparable questions (Fig. 2).

Fig. 2: : Cancer knowledge of CHWs and DHCWs in pre- and post-training assessment, compared with selected questions, mean scores in %



- CHWs and DHCWs were highly motivated to apply the cancer knowledge into practice (e.g. educate their communities about cancer, the importance of cancer screening and early detection; discuss consultation of local healers and cancer treatment with herbs).
- Both groups felt more confident about the referral pathway and started to network with other health facilities to provide outreach cancer screening in the communities.

Conclusion

- The training successfully reached its goals of increasing cancer knowledge of the community level health care workers, practical application of the new knowledge and empowerment for cancer control.
- The DHCWs were expected to have more medical knowledge than the CHWs, but did not show remarkable differences in the assessment (Fig.2). DHCWs often have no formal training, even though they are required. Due to shortage of the health workforce in Tanzania, DHCWs are often untrained and work as para-professionals [7]. This needs to be considered in further trainings.
- Community level health care providers are an important link to the health system for many people in rural Tanzania and need more trainings to provide comprehensive cancer control.
- This concept of a cancer awareness training could also be effective in many other low-resource settings in SSA with a growing burden of NCDs.

References

1. Morhason-Bello, I.O. et al. (2013). Challenges and opportunities in cancer control in Africa: a perspective from the African Organisation for Research and Training in Cancer, *The Lancet Oncology*, 14(4), e142-e151.
2. Foundation for Cancer Care Tanzania (2015). Meeting the challenge of cancer care in northern Tanzania, A program for comprehensive and sustainable care, Minnesota.
3. International Agency of Research on Cancer (2014). *World Cancer Report 2014*. Geneva: World Health Organization.
4. Rick, T. J. et al. (2017). Cancer Training for Frontline Healthcare Providers in Tanzania. *Journal of Cancer Education*.
5. CCC, KCMC/PrevACamp (edit.) (2018). *PrevATrain, Cancer awareness training for dispensary health workers and community health workers, Manual*. Moshi, Tanzania.
6. Ministry of Health and Social Welfare (MoHSW), The United Republic of Tanzania (2014). *Human resource for health and social welfare strategic plan, 2014-2019*. Dar es Salaam.
7. Wane, W. & Martin, G. (2015). *Health service delivery in Tanzania* (English). Washington, D.C.: World Bank Group.