

new ways to improve their practises; hence, they adopt technologies faster than other farmers. Congnogo et al. (2021) and Mishra et al. (2018) also observed similar finding.

Usually, farmers differ greatly in their willingness to take or avoid risks while making decisions. That is why more risk-oriented farmers are usually more likely to adopt technologies. In this study, the farmers who realized the benefits of the improved technologies took the risk of adopting the technologies. The result is supported by Congnogo et al. (2021).

IFM knowledge had a significant impact on the adoption of rice production technologies. Farmers with greater knowledge of IFM were more inclined to use the technologies because they were more aware of their benefits. This finding is consistent with the study of Chuang et al. (2020).

Access to extension services is often regarded as a critical aspect of technology adoption. Many authors have found a significant relationship between extension services and technology adoption. Agricultural extension agents usually play a significant role in the dissemination of agricultural technologies to farmers through various training programmes, group approaches, individual contact, demonstrations, and field days. Participating farmers might learn technology through the FFS approach, which was led by extension agents or trained farmer facilitators, and non-FFS farmers could learn from them. On the other hand, farmers had a great opportunity to learn and were motivated to adopt technologies through various print and electronic media. That is why extension media contact was found to have a significant relationship with the adoption of improved rice production technologies (Table 5). Almost similar findings were found by Shah et al. (2014) and Walisinghe et al. (2017).

From Table 8, the findings suggest that there was a significant and positive relationship between the adoption of improved rice production technologies and market access. Access to the market primarily consists of the ability to sell agricultural products, as well as storage and transportation facilities for agricultural products

from farm to market. Considering these points, a farmer usually decides to adopt improved technologies regarding rice production. This finding is similar to the findings of Ali et al. (2021) and Sarker et al. (2021).

## Conclusions

FFS farmers had a much greater adoption rate of improved rice farming technologies than non-FFS farmers. It was discovered that farmers' innovativeness, risk aversion, knowledge of IFM, extension media contact, and access to the market facilities play a significant role in determining the adoption of improved technologies for rice cultivation. Therefore, the implementation authorities (DAE and others) should organize more FFS in other parts of the country to ensure that improved technologies for rice farming are successfully implemented. The factors influencing the adoption of rice production technologies should be taken into account when promoting the adoption of technologies in the rice farming system.

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