

# Promoting good occupational health outcomes among farmwomen: evidence of a community-based strategy from North-Western Himalayan region, India

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Limited studies have been conducted addressing the occupational health of farm women in poorly mechanised hill farming, where women are *de facto* farmers. The present study describes an enhancement in the occupational health of hill farm women by targeting their nutrition and workloads through a well-planned strategy. A three-year quasi-experimental study was conducted to promote occupational health by implementing interventions focused on nutrition education, ergonomic training, and safety demonstrations. Different levels of intervention were tested. To evaluate impact, data on dietary diversity scores (DDS) and knowledge, attitude, and practice (KAP) were collected. A significant difference in DDS was observed between the control and full intervention groups, while no statistically significant difference was found between the control and partial intervention groups. Repeated-measures analysis also revealed significant improvements in KAP scores between the control and full intervention groups ( $P=0.005$ ) and between the partial and full intervention groups ( $P=0.009$ ). The results suggest that only the full intervention, which included demonstrations along with information, education, and communication (IEC), was effective in producing significant changes over time. The strategy was found effective as the farm women who received full intervention gained maximum benefit. To optimise the benefits to farm women, the IEC strategy, along with the nutrition gardens, training, and demonstrations, should be scaled up.

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or male counterparts usually migrate to nearby cities or states for employment. These heavy and disproportional responsibilities result in time poverty, i.e., working long hours and having no choice but to do otherwise, which becomes more intense in peak agricultural seasons.

Time poverty has multiple effects on women farmers<sup>2</sup>. Finding no time for self-care and physiological needs, as the tasks remain time-bound, these women either skip meals or settle for poor diets, adding further to chronic energy deficiency and less diversified diets. Good nutrition has a positive impact on occupational safety and health, and workplace productivity<sup>3-5</sup>. For 740 million adults worldwide, an iron shortage or anemia causes extreme exhaustion that interferes with their capacity to function effectively<sup>5</sup>. Good nutrition, like other vital occupational safety and health issues, is the foundation of workplace productivity and safety<sup>5</sup>.

Secondly, as agricultural operations like weeding, thinning, transplanting, and harvesting are time-bound and seasonal, women are bound to perform these tasks manually with some locally designed tools of less efficiency in a hurried, carefree manner to do more in less time. Performing repetitive, cumbersome, time-consuming manual tasks in haste often leads to poor posture while working, which usually deteriorates their occupational health. Physically, many agricultural workers suffer repetitive motion injuries, strains, and sprains that proper nutrition and fitness can help prevent<sup>6,7</sup>.

There are gender differences in physical performance, which are, on average, lower for women than men because of differences in factors such as muscle strength, cardiovascular function, and aerobic work capacity. Hence, women are more likely than men to experience musculoskeletal issues as a result of strenuous physical labour such as lifting and carrying, bad posture, and a high work rhythm. Women-dominant work is usually repetitive, monotonous, time-consuming, and is performed in a hurried manner.