

## Informed Consent in the Workplace Nutrition Intervention Studies: A Narrative Review on Ethical Challenges

Agra Dhira Narendraputra<sup>1</sup>, Ray Wagi Basrowi<sup>1,2</sup>

<sup>1</sup>Occupational Medicine Master Program, Department of Community Medicine, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia

<sup>2</sup>Health Collaborative Center (HCC), Jakarta, Indonesia

\*Correspondence: [agra.d.narendraputra@gmail.com](mailto:agra.d.narendraputra@gmail.com), [agra.dhira21@ui.ac.id](mailto:agra.dhira21@ui.ac.id)

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**ABSTRACT:** Workplace nutrition interventions are efforts to improve workers' health and well-being through education, counselling and environmental changes. Nutrition intervention studies are needed to evaluate the effectiveness of such programs and interventions. The aim of this study was to analyse studies on the importance and best practices of informed consent in workplace nutrition intervention studies and present the results in a narrative review. This study used qualitative research methods. The data collection technique in this research is by studying literature obtained from Google Scholar. The data collected was then analysed in three stages, namely data reduction, data presentation and drawing conclusions. The results showed that employees were fully aware of the nature of the intervention, its potential risks and benefits, and their right to withdraw from the study at any time<sup>7</sup>. This is important to respect employee autonomy and to ensure that research is conducted ethically. In conclusion, informed consent plays an important role in workplace nutrition intervention research. This not only protects the rights and welfare of employees but also contributes to the validity and ethical conduct of research.

**Keywords-** Nutritional Interventions, Workplace, Ethical Challenges

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### INTRODUCTION

Nutrition plays an important role for workers safety, health, and productivity. Occupational malnutrition includes macronutrient and micronutrient deficiencies, overweight, and obesity may lead to chronic non-communicable diseases. Company should ensure that their workers have access to nutritious, safe, and affordable foods. Most workers eat at least one main meal at the workplace during their working day. This is an opportunity for a workplace nutrition intervention program conducted by the companies (Huls et al., 2020). Workplace nutrition intervention programs have been implemented

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while continuously studied around the world. Those programs include: workplace food provision, health promotion on nutrition, and healthy diet coaching (Rachmah et al., 2022).

Researches regarding nutrition and occupational health have been carried out frequently. Observational occupational nutrition studies found the established relation between nutrition and employees' productivity (Kuoppala et al., 2008). Whereas workplace nutrition interventional studies examine the effectivity of health program to improve the health status of employees (Rachmah et al., 2022; Ghobadi et al., 2022). Workplace interventions include providing healthy lunches and nutrition education as well as company management leadership. In addition, to examine the effect of healthy lunches and nutrition education on changes in salt intake separately (Widi & Basrowi, 2024).

Conducting research for human subject cannot be separated with ethical consideration and principles, especially when the study design is interventional. Researchers sometimes are faced with ethical dilemma. Allegrante and Sloan stated that the examples of ethical dilemmas in the workplace health intervention are: conflicting loyalties of professionals, blaming the victims, voluntariness or coercion, and the dilemma of unintended consequences (Allegrante & Sloan, 1986).

Moreover, Westerholm wrote that sometimes Occupational health practitioners (OHP) are faced with ethical dilemma concerning respect for confidentiality and consent of the personal data processing, the choice of test for health surveillance, worker's right to know, and the autonomy of workers' decision, the transparency in relationships between colleagues, and the maintenance of defined professional quality standards (Westerholm, 2007).

Intervention research has a higher risk of ethical problems than observational research because it directly influences human health conditions, instead of just observing. One of the most important ethical aspects in interventional studies is informed consent. Informed consent is a process of making voluntary decision from a competent research participant to participate in research after the researcher explained all the procedures, risks, benefits, and alternatives of an interventional studies to them (Shah et al., 2023).

Informed consent in an interventional study is critical to protect the research participant from harms and abuses. In an occupational health research setting, asymmetric power relation is one of the important factors to consider (London et al., 2014). Obtaining proper and truthful informed consent from the research participant is an ethical challenge of the interventional research in the workplace (Kuhn et al., 2020).

## **RESEARCH METHODS**

This study used qualitative research methods. The data collection technique in this research is by studying literature obtained from Google Scholar. Manuscript exploration was conducted in November 2023 on Google Search and Google Scholar online databases, using keywords such as

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“informed consent in nutrition intervention studies”, “workplace nutrition interventions”, “worker nutrition interventions”, and “workplace diet interventions Work”. The collected data was then analyzed through three stages, namely data reduction, data presentation, and drawing conclusions.

### RESULTS AND DISCUSSION

The issue of respect for autonomy and voluntariness in the workplace intervention research has a high potential to emerge. Employees oftentimes feel compelled to partake in an intervention program instead of doing it as a voluntary basis.

Personal health data protection should be respected in accordance to the justice and respect for autonomy principles of bioethics. This also apply for nutrition intervention program at a workplace that requires previous employee’s consent.

There are eight research manuscripts that are reviewed in this article. Those researches are compiled in Table 1.

Author and year	Title	Study Design	Key Findings
Kuhn, et al., 2020 <sup>5</sup>	The Ethics of Workplace Health Promotion	Literature review	Ethical issues in the workplace intervention, especially health promotion programs are not adequately addressed. The recommendation is to apply bioethical principles more comprehensively in the company health program.
Allegrante, et al., 1986 <sup>9</sup>	Ethical Dilemmas in Workplace Health Promotion	Literature review	Workplace health promotion may pose ethical problems related to social justice, protection of privacy, and social control. Ethical dilemmas in the workplace health programs are: conflicting loyalties of professionals, blaming the victims, voluntariness or coercion, and the dilemma of unintended consequences.
London et al., 2014 <sup>10</sup>	Ethics in Occupational	Literature review	Four dilemmas in occupational health practice in Africa: workplace

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Author and year	Title	Study Design	Key Findings
	Health: Deliberations of an International Workgroup Addressing Challenges in an African Context		vulnerability; consent; stigma; and the absence of a distinction between work and home. Power differential in the workplace compromise workers' ability to practice the right to self-determination. Worker's ability to give autonomous and voluntary consent for occupational health program are limited due to poverty, lower education levels, and skills.
Van Berkel et al., 2014 <sup>11</sup>	Ethical considerations of worksite health promotion: an exploration of stakeholders' views	Qualitative, focused group discussion	There is a disagreement between employers and employee regarding the responsibility of lifestyle behavior change in the occupational health setting. Employees see it as an autonomy, whereas employers see it as a duty. This issue contributes to ambivalent relationships between the stakeholders.
Hurlimann et al., 2017 <sup>13</sup>	Ethical issues in the development and implementation of nutrition-related public health policies and interventions: A scoping review	Literature review	The bioethical point of view, the intervention of obesity and its non-communicable disease complications are the most frequently discussed subjects compared to other topics, such as undernutrition, breastfeeding, supplement, food fortification, food security, sustainability, and safety. The ethical issues faced in the development and implementation of nutrition-related interventions

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<b>Author and year</b>	<b>Title</b>	<b>Study Design</b>	<b>Key Findings</b>
			are varied and cannot be generalized. These ethical issues cannot be managed without a careful consideration for the complexity of contexts.
Kakimoto K, 2020 <sup>14</sup>	Is the workplace wellness program doing good?: ethical considerations around health promotion at workplace	Literature review	Researchers need to evaluate health intervention programs and think about how these programs are ethically justifiable. The researchers need to involve stakeholders so that they can voice their needs and concerns about the intervention. In terms of autonomy, a major concern could be whether employees are fully informed and understand how the information will be used. Employees should be informed clearly that they have the right to opt out of the program.
Oktaviani N, et al, 2023 <sup>15</sup>	The Effect of Nutrition Counseling and REST™ Diet also Occupational Factors on Weight Loss among Hospitals Nurses with Excessive Weight	Interventional study	This study was one-group pre-post intervention, conducted for 22 nurses with excessive nutritional status as study participants. The intervention was nutrition counselling and implementing REST™ diet. The research participants in this study must have willingness to fully participate during the study, stated in the informed consent. Research explanation and direction were given to the participants

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Author and year	Title	Study Design	Key Findings
	Nutritional Status (Study in The Occupational Health Hospital of West Java Province)		before eventually they filled out a consent form. The study participant may withdraw from the study and considered as drop-out. Participants who refused to continue their participation, even though they have signed a consent, were released from the study without any fines nor penalties.
Akbar F and Basrowi RW, 2022 <sup>16</sup>	Issues About Digital Informed Consent in Clinical Research	Literature Review	Digital informed consent gives better opportunity to communicate with research participant, but needs the consistency of the application and standardization. Informed consent must be in the language that is easy to be understood by the research participants and transparent. In the informed consent, it is must be stated that research participant may withdraw the consent at any time and resign from the research. In interventional studies with biological samples, the process of obtaining informed consent is more rigorous. In the future, the issue of morals and ethics of informed consent in interventional studies will continuously grow.

### Discussion

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In the ‘Principles of Biomedical Ethics’ by Beauchamp and Childress (Beauchamp & Childress, 2013), the four principles of bioethics are respect for autonomy, non-maleficence, beneficence and, justice. These principles should always be developed for bilateral relationships between individuals and the researchers. This covers the employee and occupational physician relationship. Informed consent is an important ethical principle in research. It ensures that participants understand the potential risks and benefits of participating in a study. This principle is particularly important in workplace nutrition intervention research, where employees’ health and well-being are directly impacted (World Council for Health, 2021). Informed consent exists to protect individuals from coercion, medical experimentation, and procedures that may cause them more harm than benefit. Since the individual is the one who has to live with the consequences of any intervention, they should be given the information to make an informed, free choice (World Council for Health, 2021).

Workplace nutrition intervention research aims to evaluate the effectiveness of nutrition and health interventions in the workplace setting (Rachmah et al., 2022; Grimani et al., 2019). These interventions can include nutrition education, changes in the food environment in the workplace, and other health promotion strategies (Rachmah et al., 2022; Grimani et al., 2019). Research has shown that these interventions can have positive outcomes, including increased nutrition knowledge, reduced risky behavior, improved body mass index, and improved blood biomarkers (Rachmah et al., 2022; Ghobadi et al., 2022). Furthermore, these interventions have been shown to positively impact work-related outcomes, especially absenteeism (Grimani et al., 2019).

The issue of respect for autonomy and voluntariness in the workplace intervention research has a high potential to emerge. This, for example, arises from the hierarchical circumstances within a company. Employees oftentimes feel compelled to partake in an intervention program instead of doing it as a voluntary basis (Kuhn et al., 2020).

Personal health data protection should be respected in accordance to the justice and respect for autonomy principles of bioethics. This also apply for nutrition intervention program at a workplace. Nutritional diary program, for example, whether in mobile phone application or web database portal, which allows physician and company health provider to access requires previous employee’s consent (Grimani et al., 2019).

In case of giving appropriate informed consent for the research, one of the most prominent issues was power differential in the workplace. Power differential in the workplace compromise workers’ ability to practice the right to self-determination. Worker’s ability to give autonomous and voluntary consent for occupational health program are limited due to poverty, lower education levels, and skills (London et al., 2014). Researchers must collaborate with company management to clearly explain that the research will not affect the employment status of any participant, salary and benefit, nor causing other discriminations. Employees should be informed clearly that they have the right to opt out of the

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program (Kakimoto, 2020). Informed consent in the interventional studies must always give the opportunity for the participant to withdraw from the study without any consequences (Oktaviani et al., 2023).

### **CONCLUSION**

In the context of workplace nutrition intervention research, informed consent ensures that employees are fully aware of the nature of the intervention, its potential risks and benefits, and their right to withdraw from the study at any time. This is crucial to respect the autonomy of the employees and to ensure that the research is conducted ethically. In conclusion, informed consent plays a vital role in workplace nutrition intervention research. It not only protects the rights and well-being of the employees but also contributes to the validity and ethical conduct of the research. Therefore, it is essential that researchers prioritize obtaining informed consent when conducting workplace nutrition intervention research.

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