Evaluation of the Occupational Safety and Health (OSH) Implementation Program in Public Secondary Schools in Valenzuela City: Basis for a School Continuity Plan

Marlon V. Baquillos, Dr. Arnel L. Poja, Dr. Ryan Romnick B. Sanchez

Department of Education, Schools Division Office of Valenzuela City, Pamantasan ng Lungsod ng Valenzuela

DOI: https://doi.org/10.47772/IJRISS.2026.1026EDU0283

Received: 08 May 2026; Accepted: 14 May 2026; Published: 03 June 2026

ABSTRACT

This study evaluates the implementation of the Occupational Safety and Health (OSH) program in public secondary schools in Valenzuela City during the 2025–2026 school year. Anchored on the CIPP (Context–Input–Process–Product) Model, it aims to examine the alignment between national policy mandates and localized school practices as a basis for developing a School Continuity Plan (SCP). A quantitative descriptive–correlational–predictive design was employed, with data collected from 100 school personnel—including School Heads, SDRRMC Coordinators, School Clinicians, and Teachers—using a standardized OSH monitoring checklist.

Findings indicate that OSH implementation across occupational safety, occupational health, and industrial hygiene is at a high level. A significant difference in perception was observed based on respondents' position, with School Heads reporting higher ratings than SDRRMC Coordinators. However, no significant differences were found when grouped according to length of service, school size, and budget, suggesting consistent implementation across school contexts. Regression analysis further revealed that profile variables do not significantly predict OSH implementation, accounting for only 5.7% of the variance, implying the influence of organizational factors such as leadership and safety culture. A weak but significant relationship was noted between OSH training and industrial hygiene practices.

The study concludes that while OSH practices are generally well-implemented, they remain largely compliance-driven. The proposed School Continuity Plan emphasizes institutionalized certification, digital monitoring systems, and dedicated funding to enhance sustainability and resilience in school operations.

Keywords: Occupational Safety and Health (OSH), School Continuity Plan (SCP), program evaluation, industrial hygiene, DRRM, CIPP Model.

The Problem and a Review of Related Literature

INTRODUCTION

Occupational Safety and Health (OSH) in the Philippine education sector is anchored on a comprehensive legal and institutional framework designed to protect both school personnel and learners from potential hazards within the learning environment. Republic Act No. 11058, or the Occupational Safety and Health Law of 2018, guarantees every worker's right to a safe and healthy workplace and mandates the establishment of safety and health programs, designation of trained safety officers, and provision of medical and protective services. Complementing this is Republic Act No. 10121, or the Philippine Disaster Risk Reduction and Management (DRRM) Act of 2010, which expands the scope of safety to include disaster preparedness, risk reduction, and resilience. These national policies are reinforced in the education sector through Department of Education (DepEd) Orders No. 37, s. 2015 and No. 14, s. 2020, as well as the Civil Service Commission (CSC) and Department of Health (DOH) Joint Memorandum Circular No. 1, s. 2020, collectively institutionalizing a whole-of-government approach to safety, health, and well-being in schools.

Despite the presence of comprehensive national policies such as RA 11058 and RA 10121, inconsistencies in the implementation of Occupational Safety and Health (OSH) programs across public schools persist. While many institutions demonstrate compliance with basic safety requirements, variations in resource allocation, personnel capacity, and monitoring systems may compromise the effectiveness and sustainability of OSH practices. These inconsistencies pose significant risks to school safety and may hinder the ability of schools to maintain operational continuity during emergencies and disasters.

More critically, the absence of localized, data-driven evaluation limits the capacity of schools to identify systemic gaps and implement targeted interventions. Without empirical evidence linking institutional factors to OSH implementation outcomes, safety programs risk remaining compliance-driven rather than performance-driven.

This situation underscores critical concern: the existence of policies does not necessarily translate into effective implementation. Schools operate in diverse contexts characterized by differences in resources, administrative capacity, infrastructure, and exposure to risks. Consequently, a uniform policy framework may produce varied outcomes when applied across different school settings. In Valenzuela City, while schools exhibit commendable adherence to general safety standards, the extent to which OSH programs are embedded in routine practices, systematically monitored, and continuously improved remains unclear. This raises important questions regarding the actual effectiveness and sustainability of OSH implementation at the local level.

While national mandates such as RA 11058 and RA 10121 provide a strong legal foundation, the lack of localized empirical evidence in Valenzuela City limits the development of context-specific safety interventions. Without such evidence, the concept of school continuity during disasters remains largely theoretical. This study addresses this gap by examining how OSH policies are operationalized within public secondary schools and by generating data that can inform practical and responsive safety strategies. In doing so, it supports the transformation of schools into genuine safe spaces capable of sustaining operations during both routine conditions and emergency situations.

Existing studies on OSH in schools are predominantly descriptive and focus on compliance levels rather than examining the underlying factors influencing implementation. Conceptually, there is limited integration of institutional variables such as training, budget, and personnel roles into predictive models of OSH effectiveness. Methodologically, few studies employ inferential and predictive analyses to explain variations in implementation. Locally, there is a lack of division-level empirical research in Valenzuela City that connects OSH implementation with school and personnel characteristics. This study addresses these gaps by adopting a predictive and analytical approach to OSH program evaluation.

A significant gap therefore exists in understanding how OSH programs are implemented at the division or city level, particularly in relation to key variables such as personnel characteristics, training exposure, school size, and resource availability. In the context of Valenzuela City, there is a lack of comprehensive evaluation that links these factors to actual levels of OSH implementation. Furthermore, there is limited effort to translate assessment findings into a structured and localized School Continuity Plan that integrates occupational safety, health, and disaster risk reduction into a unified framework for sustained school operations.

Addressing these gaps is essential to improving the effectiveness and sustainability of OSH programs in schools. Without a clear understanding of the factors that influence implementation, interventions may remain generalized and insufficiently responsive to the specific needs of individual schools. More importantly, the absence of a data-driven continuity framework may hinder schools' ability to respond effectively to both everyday risks and large-scale emergencies.

In view of these considerations, this study aims to evaluate the extent of implementation of the Occupational Safety and Health (OSH) program in public secondary schools in Valenzuela City. Specifically, it seeks to determine the level of implementation in terms of occupational safety, occupational health, and industrial hygiene, and to examine whether these vary when respondents and schools are grouped according to their profiles. The study also investigates the predictive influence of selected factors, including length of service, position, OSH-related training, school size, and budget, on the level of OSH implementation.

The findings of this study are expected to identify strengths and gaps in current OSH practices and serve as the basis for developing a School Continuity Plan (SCP). This plan will provide a localized, evidence-based framework to support schools in maintaining safe, healthy, and resilient learning environments under both normal and emergency conditions.

Ultimately, this research contributes to the continuous improvement of Occupational Safety and Health practices in the public education system. By generating localized empirical evidence, it aims to inform policy enhancement, strengthen school-based safety management, and support the institutionalization of proactive and sustainable safety practices. In doing so, the study advances the broader goal of ensuring that school's function not only as centers of learning but also as safe, adaptive, and resilient environments for all stakeholders.

Review of Related Literature

This chapter highlights the salient features of the topic concerning the evaluation of occupational safety and health implementation. The results of the review of related literature from foreign and local sources are summarized and presented thematically.

OSH Policy Foundations and Governance in Schools

Occupational Safety and Health (OSH) in schools are grounded in international and national frameworks that emphasize institutional responsibility in ensuring safe learning environments. At the global level, the International Labour Organization (ILO, 2021) stresses that schools must adopt systematic OSH management systems that protect both employees and learners, recognizing schools as dual environments for work and learning. In the same direction, the Comprehensive School Safety Framework (UNDRR & Global Alliance for Disaster Risk Reduction in Education, 2022) reinforces three core pillars: safe learning facilities, school disaster management, and risk reduction and resilience education. These global frameworks align with the Sendai Framework for Disaster Risk Reduction (2015–2030), which continues to guide national education systems in strengthening institutional resilience.

In the Philippine context, OSH governance is institutionalized through Republic Act No. 11058 and DOLE Department Order No. 198-18, reinforced by Republic Act No. 10121 or the DRRM Act of 2010. In the education sector, these are operationalized through DepEd Order No. 14, s. 2020 (health and safety protocols during emergencies such as COVID-19) and DepEd Order No. 37, s. 2022 (school disaster risk reduction and management strengthening guidelines). The Civil Service Commission (CSC) and Department of Health (DOH) Joint Memorandum Circular No. 1, s. 2020 further strengthened workplace safety standards in government institutions, including schools.

Despite these strong policy frameworks, recent studies emphasize a persistent implementation gap. Garcia and Santos (2022) found that policy awareness among school personnel does not always translate into consistent OSH practice, especially in resource-limited public schools. This suggests that while governance structures are well-established, their operationalization at the school level remains uneven.

OSH Implementation Practices in Schools

Recent literature shows that OSH implementation in schools is generally characterized by partial and uneven application. Internationally, Turner et al. (2021) found that schools in Southeast Asia implement basic safety measures such as emergency drills and sanitation protocols but lack consistent monitoring and evaluation systems. Similarly, Rahman and Hussain (2023) observed that OSH programs in schools are often compliance-driven rather than integrated into daily institutional practices.

In the Philippines, Dela Cruz and Navarro (2022) reported that public schools demonstrate strong compliance in fire safety drills and DRRM activities but show weaknesses in sustaining OSH practices such as continuous hazard assessment and mental health integration. In Valenzuela City, Pineda et al. (2023) found that while schools comply with core OSH requirements, inconsistencies exist in training frequency, availability of protective equipment, and integration of safety practices into daily operations.

Comparatively, more advanced implementation is observed in countries such as Japan and South Korea, where OSH is embedded into curriculum delivery and school culture (Kim & Lee, 2021). This contrast suggests that Philippine schools remain in a compliance-based stage rather than a fully institutionalized safety culture stage.

OSH Resources and Institutional Capacity

A strong body of literature highlights that OSH implementation is heavily dependent on institutional capacity, particularly financial resources, human capital, and infrastructure quality. According to WHO (2021), inadequate school infrastructure such as poor ventilation, unsafe laboratories, and insufficient sanitation facilities significantly increases occupational and health risks in educational settings.

In the Philippines, Cruz et al. (2022) found that schools with higher Maintenance and Other Operating Expenses (MOOE) allocations demonstrate better OSH compliance and implementation capacity. However, many public schools still face shortages in trained safety officers and health personnel, limiting their ability to fully implement OSH programs.

Similarly, Reyes and Alcantara (2023) noted that resource limitations in Philippine public schools result in prioritization of academic requirements over safety investments. This finding is consistent with international studies by Smith and Taylor (2022), which emphasize that underfunded schools tend to treat OSH as a secondary concern rather than a core institutional priority.

OSH Compliance and Policy Implementation in the DepEd Context

Compliance with OSH-related DepEd policies has improved in recent years, particularly after the COVID-19 pandemic. Mendoza and Lagrimas (2022) found that Philippine public schools consistently comply with mandated safety protocols such as DRRM drills, safety committee formation, and submission of safety reports.

However, compliance remains largely procedural. Santos (2023) argues that many schools comply with documentation requirements but lack substantive implementation in terms of continuous risk assessment and monitoring. This “paper compliance” phenomenon indicates that OSH policies are often implemented for regulatory fulfillment rather than institutional transformation.

Internationally, similar findings were reported by Brown et al. (2021), who observed that schools in developing education systems often meet minimum compliance standards but struggle with long-term sustainability of OSH programs due to weak institutional monitoring.

OSH Challenges and Barriers in Schools

Recent studies consistently identify structural and operational barriers to effective OSH implementation. In the Philippines, Salanguit et al. (2024) found that public schools face challenges such as insufficient funding, limited trained personnel, and weak technical support systems, which hinder full OSH implementation.

During and after the COVID-19 pandemic, these challenges became more visible. Villanueva (2022) reported that schools struggled to maintain health protocols due to shortages in medical supplies and limited school clinic capacity. Similarly, Fernandez (2021) noted that despite clear DepEd guidelines, many schools lacked isolation facilities and trained health personnel.

Internationally, Alhassan and Oppong (2023) found that African and Southeast Asian schools face similar constraints, where OSH implementation is hindered by financial limitations and weak governance systems. However, schools with strong leadership and stakeholder engagement were able to partially overcome these constraints, highlighting the importance of organizational culture.

Stakeholder Roles and OSH Safety Culture

Recent literature emphasizes that OSH effectiveness depends significantly on stakeholder awareness and participation. According to Lopez and Cruz (2022), teacher engagement and leadership commitment are critical predictors of OSH success in Philippine schools.

In Indonesia, Pratama and Sari (2021) found that schools with active teacher participation in safety programs demonstrate significantly higher compliance and safety awareness among students. Similarly, Kim and Park (2022) reported that school safety culture in Korea is strongly influenced by collaborative governance between administrators, teachers, and community stakeholders.

In the Philippines, Bautista (2023) found that although awareness of OSH has increased after the pandemic, actual participation in safety programs remains inconsistent due to workload pressures and limited training opportunities.

Synthesis

The reviewed literature highlights several important patterns. First, OSH in schools is increasingly recognized as a multi-dimensional system involving governance, resources, compliance, and stakeholder engagement. Second, while policy frameworks in both international and Philippine contexts are well-established, implementation remains inconsistent and largely compliance-driven. Third, institutional capacity, particularly funding, training, and infrastructure plays a critical role in determining OSH effectiveness.

However, a clear gap remains in recent literature (2021–present). Most studies focus on describing OSH implementation or identifying general challenges but do not examine the predictive relationship between school characteristics (e.g., size, budget, personnel profile, and training exposure) and OSH implementation levels. Additionally, there is limited division-level empirical research in the Philippine context that integrates these variables into a structured analytical model.

In Valenzuela City, existing studies such as Pineda et al. (2023) provide descriptive insights but do not fully examine the determinants of OSH implementation across different school contexts. Furthermore, there is a lack of studies that translate OSH assessment findings into a localized School Continuity Plan that integrates safety, health, and disaster resilience.

Addressing this gap is essential to move beyond compliance-based evaluation toward a predictive and evidence-based understanding of OSH implementation. This study therefore seeks to fill this gap by analyzing OSH implementation in public secondary schools in Valenzuela City and examining the influence of key school-related factors.

The reviewed literature suggests that OSH implementation in schools is influenced by multiple interrelated factors. Governance structures establish the policy foundation, but effective implementation depends on institutional capacity, including financial resources, infrastructure, and trained personnel. Furthermore, stakeholder engagement and leadership commitment play a critical role in translating policy into practice. While schools generally comply with regulatory requirements, the literature indicates that implementation remains largely procedural rather than systemic. This highlights the need for a predictive and evidence-based approach to understanding how specific variables influence OSH effectiveness in real-world school settings.

Theoretical Framework

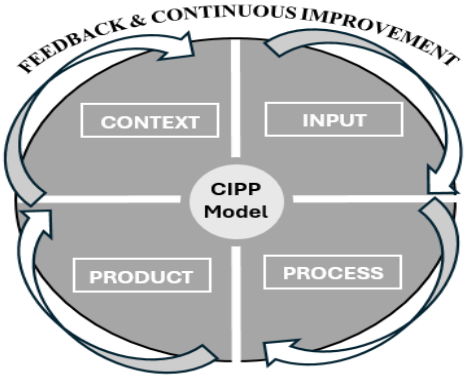

Figure 1. Theoretical Framework of the Study Using the Context-Input–Process–Product (CIPP) Model

The study is anchored on the Context–Input–Process–Product (CIPP) Evaluation Model developed by Daniel Stufflebeam. The CIPP model is a comprehensive evaluation framework widely used in assessing programs, policies, and institutional systems. It is designed to support decision-making and continuous improvement by systematically examining four key components: context, input, process, and product.

The CIPP model is grounded on the principle that effective program evaluation should not only focus on outcomes but also on the conditions and processes that produce such outcomes. It provides a structured way of answering essential evaluation questions: What needs to be done? How should it be done? Is it being implemented effectively? and did it achieve its intended results? (Stufflebeam, 2003).

In contemporary educational research, the CIPP model remains widely applied in evaluating school-based programs, particularly in areas such as health, safety, and institutional development. Its strength lies in its system-based approach, where each component serves a specific evaluative function. Context evaluation identifies needs and environmental conditions; Input evaluation examines available resources and strategies; Process evaluation monitors implementation; and Product evaluation determines outcomes and effectiveness.

Conceptual Framework

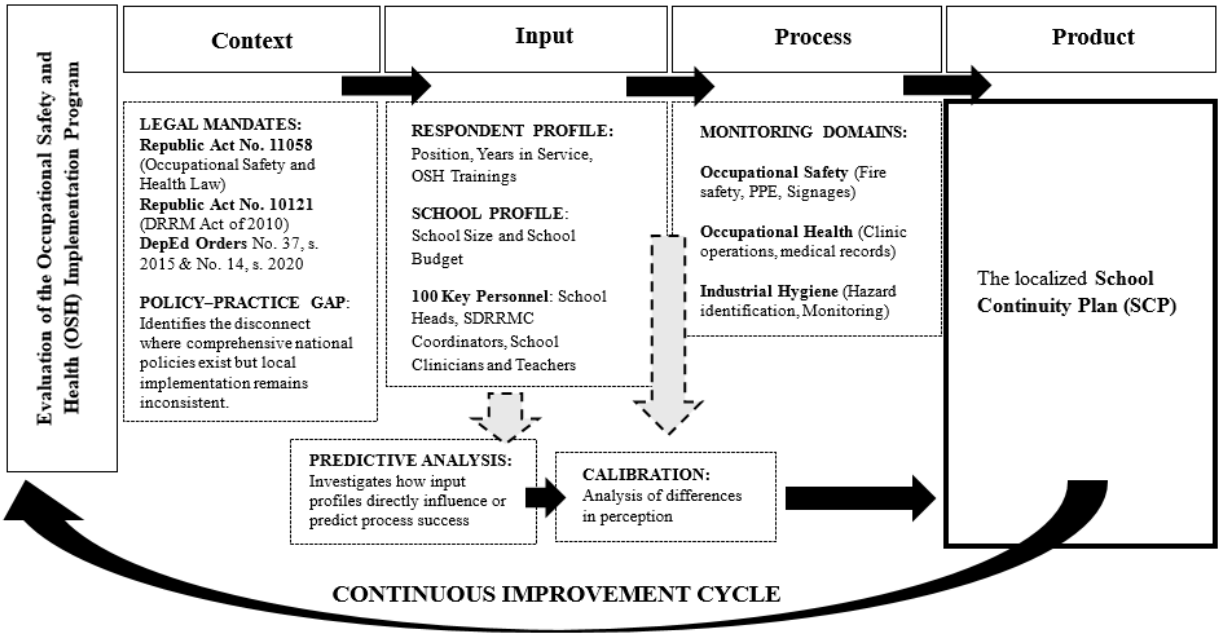

Figure 2. Conceptual Framework of the Study Using the Context-Input–Process–Product (CIPP) Model

The study is anchored on the Context–Input–Process–Product (CIPP) Model, illustrating a systematic and cyclical approach to evaluating the implementation of the Occupational Safety and Health (OSH) program in public secondary schools and translating evaluation results into a localized School Continuity Plan (SCP).

The Context component establishes the legal and policy environment governing OSH implementation, including Republic Act No. 11058, Republic Act No. 10121, and relevant Department of Education issuances. These mandates define institutional obligations for workplace safety, health protection, and disaster preparedness in schools. However, the framework highlights a policy–practice gap, recognizing that despite comprehensive national policies, local-level implementation may remain inconsistent. This gap underscores the need for empirical evaluation to determine how OSH standards are operationalized in actual school settings.

The Input component represents the institutional and human resources that may influence OSH implementation. These include respondents' profile variables (position, years of service, and OSH-related training) and school profile variables (school size and MOOE budget), drawn from 100 key school personnel composed of School Heads, SDRRMC Coordinators, School Clinicians, and Teachers. These inputs function as potential predictor variables, allowing the study to examine whether demographic and structural factors meaningfully influence

OSH implementation processes.

The Process component focuses on the operationalization of OSH through three monitoring domains: Occupational Safety (fire safety, PPE, signages), Occupational Health (clinic operations and medical records), and Industrial Hygiene (hazard identification and monitoring). This stage reflects how contextual mandates and available inputs are translated into concrete school-level practices. Embedded within the framework are predictive analysis, which tests the influence of input variables on implementation, and calibration, which examines differences in perceptions among respondent groups.

The Product component represents the primary outcome of the evaluation, culminating in the development of a localized School Continuity Plan (SCP). Rather than limiting outcomes to compliance levels, the SCP serves as an applied and strategic output aimed at strengthening institutional resilience and ensuring safe and uninterrupted school operations. Enclosed within a continuous improvement cycle, the framework emphasizes that OSH implementation is an ongoing process where evaluation results inform policy alignment, system enhancement, and sustained school safety governance.

Statement of the Problem

This study aimed to evaluate the implementation of the Occupational Safety and Health (OSH) program in public secondary schools in Valenzuela City, with the end goal of developing a localized School Continuity Plan. It focused on how existing OSH policies and practices are applied and sustained across schools under the Schools Division Office of Valenzuela.

Specifically, it seeks to answer the following questions:

1. What is the profile of the respondents in Valenzuela City public secondary schools in terms of:

1.1 Position;

1.2 Length of service; and

1.3 OSH-related training attended.

2. What is the profile of Valenzuela City public secondary schools in terms of:

2.1 School size; and

2.2 School MOOE Budget

3. What is the level of implementation of the Occupational Safety and Health (OSH) program in Valenzuela City public secondary schools in terms of:

3.1 Occupational safety,

3.2 Occupational health, and

3.3 Industrial hygiene?

4. Is there a significant difference in the level of OSH program implementation among Valenzuela City public secondary schools when grouped according to respondent's profile?

5. Is there a significant difference in the level of OSH program implementation among Valenzuela City public secondary schools when grouped according to their school profile?

6. Which among the demographic profile variables (position, length of service, and OSH-related trainings) and school profile variables (school size and school MOOE budget) significantly predict the level of OSH program implementation in public secondary schools in Valenzuela City?

7. Is there a significant relationship between school and respondents profile variables and the level of OSH program implementation?

8. Based on the findings, what School Continuity Plan may be proposed to strengthen the implementation of the OSH program in Valenzuela City public secondary schools?

Hypothesis

H_o1: There is no significant difference in the level of OSH implementation when grouped according to respondents' profile.

H_o2: There is no significant difference in the level of OSH implementation when grouped according to schools' profile.

H_o3: None of the predictor variables (Position, Length of service, OSH-related trainings, School size, and School MOOE budget) significantly predicts the level of OSH program implementation in public secondary schools in Valenzuela City.

H_o4: There is a significant relationship between profile variables and OSH implementation.

H_o5: OSH-related training and school MOOE budget significantly predict the level of OSH implementation.

Scope and Delimitations

This study was carried out in public secondary schools in Valenzuela City during the School Year 2025–2026, with the data collection and finalization of the proposed School Continuity Plan completed by April 2026. The research engaged key personnel directly accountable for the implementation of OSH policies, specifically the School Head, SDRRMC Coordinator, School Clinician, and Teacher. This evaluation concentrated on examining school profiles regarding size and budget, measuring the implementation levels of OSH programs in the areas of occupational safety, health, and industrial hygiene, and identifying the strengths and critical gaps in program implementation. The scope was strictly confined to public secondary schools, excluding private institutions and higher education facilities. Furthermore, learners were not included as respondents because the study prioritized the perspectives of personnel tasked with the governance and operational management of OSH standards.

Significance of Study

This study on the extent of Occupational Safety and Health (OSH) program implementation and the challenges encountered in Valenzuela City public schools holds significant implications for multiple stakeholders in the education and governance sectors. By identifying existing gaps and proposing a School Safety Enhancement Plan, the research contributes to both academic discourse and practical policymaking.

For Teachers and Non-Teaching Staff. The study provides valuable insights into the effectiveness of OSH policies and programs designed to protect their well-being in the workplace. A safer school environment reduces risks of accidents, illnesses, and work-related stress, thereby enhancing their productivity and job satisfaction. The findings will also empower staff by highlighting their role as frontline implementers of OSH practices.

For Learners. Ensuring OSH compliance translates into safe and supportive learning spaces where students can thrive academically and emotionally. By addressing issues such as sanitation, ventilation, disaster preparedness, and psychosocial support, the study contributes to safeguarding learners' right to quality education in a safe environment. The results also emphasize the role of schools as protective spaces during crises and emergencies.

For School Administrators. The research serves as a diagnostic tool that helps administrators assess the strengths and weaknesses of their current OSH programs. By understanding the challenges related to infrastructure, resource allocation, and stakeholder engagement, school heads will be better equipped to craft evidence-based safety policies, allocate resources more effectively, and ensure compliance with national standards. The proposed School Safety Enhancement Plan will serve as a practical guide in strengthening

governance and institutional culture of safety.

For Policy Makers and Education Authorities. The study informs decision-makers at the Schools Division Office of Valenzuela, DepEd, and local government units by providing empirical evidence on the actual state of OSH program implementation in public schools. This evidence-based approach can guide policy refinements, resource prioritization, and program designs that are responsive to the local context. It also supports the alignment of local initiatives with national and international frameworks such as RA 11058, RA 10121, and the Comprehensive School Safety Framework (CSSF 2022–2030).

For Community. This research holds substantial value by underscoring the function of Valenzuela City's public secondary schools as critical hubs and dependable safe havens during local emergencies. Through the establishment of comprehensive Occupational Safety and Health (OSH) protocols, this study promotes wider community resilience, guaranteeing that educational facilities remain both operational and protected from hazards when serving as response centers or evacuation sites.

For Future Researchers. This study adds to the limited body of literature on OSH in Philippine basic education, particularly at the division level. It provides a baseline for comparative studies in other localities and opens opportunities for further research on specialized aspects of school safety, such as psychosocial health, climate change resilience, and integration of OSH in curriculum and instruction.

In general, the study bridges the gap between policy and practice by contextualizing national mandates within the realities of public schools in Valenzuela City. Its ultimate contribution lies in the development of a School Safety Enhancement Plan, which aims to provide actionable strategies for sustaining a safe, resilient, and health-oriented educational environment for all stakeholders.

Definition of Terms

For clarity and understanding, the following terms are operationally or conceptually defined.

Compliance. It refers to the extent to which schools adhere to national and local OSH standards, including those mandated by DepEd, DOLE, and other regulatory agencies. It will be assessed in this study through reported practices, facilities, and monitoring mechanisms.

Continuity Plan. A continuity plan refers to a structured approach aligned with Occupational Safety and Health (OSH) standards to ensure that school operations remain functional during and after emergencies or disruptions. In this study, it emphasizes compliance with OSH principles by incorporating risk assessment, preventive and control measures, emergency preparedness, health and safety management, resource utilization, and systematic monitoring. The plan serves not only to protect the welfare of learners, teachers, and staff but also to uphold the school's capacity to deliver essential services despite unforeseen events.

Industrial Hygiene. It refers to the discipline concerned with anticipating, recognizing, evaluating, and controlling environmental factors in the workplace that may cause sickness, impaired health, or discomfort. Within the scope of this research, industrial hygiene includes the identification, evaluation, and management of physical, chemical, biological, and ergonomic hazards present in school settings.

Occupational Health. It pertains to the promotion and maintenance of physical, mental, and social well-being of workers by preventing work-related illnesses and diseases. For this study, occupational health focuses on how various hazards and risks in schools may affect the health of teachers, learners, and non-teaching personnel, and emphasizes the importance of school-based health programs in mitigating such risks.

Occupational Safety. It refers to the aspect of workplace management that deals with identifying the causes of accidents and preventing unsafe acts and conditions in the school environment. In this study, it specifically covers practices such as good housekeeping, proper handling and storage of materials, machine and electrical safety, fire prevention and control, safety inspections, and accident investigations.

Occupational Safety and Health (OSH). In this study, OSH refers to the policies, programs, and practices

implemented in Valenzuela City public schools to protect teachers, non-teaching staff, and learners from hazards, risks, and emergencies. It covers physical, environmental, psychosocial, and health-related dimensions of school safety.

Risk Reduction and Resilience Education. Refers to the integration of safety, disaster preparedness, and resilience topics in the curriculum, co-curricular activities, and awareness campaigns in schools. For this study, it is operationalized as the extent of knowledge, attitudes, and practices instilled among teachers and learners.

Safe Learning Facilities. Pertains to the adequacy and safety of school infrastructure, including classrooms, laboratories, playgrounds, ventilation, sanitation, and structural integrity, as measured in this study by school compliance with safety standards and regular inspections.

School Continuity Plan (SCP). The School Continuity Plan is the intended output of this study, serving as a practical guide for public secondary schools in Valenzuela to strengthen Occupational Safety and Health (OSH) practices. It will be developed from the identified challenges, gaps, and effective practices gathered through the research, ensuring that safety, health, and risk reduction measures are consistently applied to protect teachers, learners, and school personnel during both normal operations and unforeseen disruptions.

School Disaster Management. In the context of this study, this includes preparedness measures such as earthquake and fire drills, emergency evacuation plans, and disaster response systems implemented in public schools. It is assessed in terms of frequency, effectiveness, and stakeholder participation.

Stakeholder Awareness. It denotes the level of knowledge and understanding of teachers, administrators, and students regarding OSH policies and practices. In this study, it is measured through reported participation in training, drills, orientations, and day-to-day compliance.

METHODOLOGY

This chapter highlights the research design, sources of data, respondents and sampling techniques, research instruments, data gathering procedures, data processing, and statistical analysis of the present study.

Research Design

This study employed a quantitative descriptive–correlational–predictive research design to not only describe OSH implementation but also examine relationships and identify significant predictors influencing implementation levels.

The descriptive component was used to present the profiles of respondents in terms of position, length of service, and OSH-related training, as well as the characteristics of schools in terms of school size and MOOE budget. It also described the level of OSH program implementation in terms of occupational safety, occupational health, and industrial hygiene. This provided a clear profile of the status of OSH implementation in the selected schools.

The correlational component was utilized to examine the relationship between respondents' and school profile variables and the level of OSH program implementation. This allowed the study to determine whether variations in implementation are associated with differences in personnel and institutional characteristics.

The predictive component was employed to identify which among the selected variables significantly predict the level of OSH program implementation in public secondary schools. This approach provides a deeper explanation of the factors influencing OSH implementation and supports evidence-based planning for school safety improvements.

According to recent methodological literature, quantitative descriptive–correlational–predictive designs are appropriate for studies that aim not only to describe phenomena but also to explain relationships and identify predictors among variables (Bloomfield & Fisher, 2019; Creswell & Creswell, 2023). This design is particularly suitable for educational program evaluations where both implementation levels and influencing factors are examined in a single analytical framework.

In line with this, the present study integrates multiple dimensions of analysis to provide a comprehensive understanding of OSH implementation in schools. The findings will serve as the empirical basis for developing a localized School Continuity Plan aimed at strengthening safety systems, institutional resilience, and operational continuity in public secondary schools.

Research Locale

The study was carried out in selected public schools in Valenzuela City, a highly urbanized locality within Metro Manila. Schools in the area differ in terms of size, geographical setting, and available resources, making the city a suitable context for examining the implementation of Occupational Safety and Health (OSH) programs. Concentrating on Valenzuela allows the research to generate context-specific insights that will inform the development of a proposed School Contingency Plan.

Sampling Procedure

This study employed a purposive sampling technique combined with stratified equal allocation, a non-probability sampling approach where participants were selected based on specific roles directly involved in Occupational Safety and Health (OSH) implementation in public secondary schools in Valenzuela City.

Purposive sampling was used because the study required respondents who possess direct knowledge, experience, and responsibility in OSH program implementation and school safety governance. As emphasized by Creswell and Creswell (2023), purposive sampling is appropriate in quantitative studies when specific information-rich participants are needed to ensure validity of program evaluation data.

The primary basis for inclusion was functional role within the school's safety and health management structure, specifically School Heads, SDRRMC Coordinators, School Clinicians, and Teachers actively involved in school-based safety implementation. To ensure equal representation across roles and avoid dominance of a single group perspective, the study employed an equal allocation strategy, selecting an equal number of respondents per category.

Only respondents who met specific inclusion criteria were selected for this study. These criteria require that participants have a minimum of one (1) year of service in their respective schools to ensure sufficient exposure to school operations and OSH-related practices. In addition, respondents must have direct involvement in Occupational Safety and Health (OSH) activities such as participation in safety drills, training, safety committee functions, health monitoring, or emergency preparedness programs. This requirement ensured that participants possessed relevant, first-hand experience in OSH implementation within the school setting. Furthermore, only those who expressed willingness to participate and provide informed and reliable responses were included in the study. This sampling approach ensured that the data gathered reflected practitioner-based insights grounded in actual school safety practices rather than general perceptions, thereby enhancing the reliability and validity of the findings in evaluating OSH program implementation.

Participants of the Study

Only respondents who met specific inclusion criteria were selected for this study. These criteria required that participants have a minimum of one (1) year of service in their respective schools to ensure sufficient exposure to school operations and OSH-related practices. In addition, respondents must have direct involvement in Occupational Safety and Health (OSH) activities such as participation in safety drills, training, safety committee functions, health monitoring, or emergency preparedness programs. This requirement ensured that participants possessed relevant, first-hand experience in OSH implementation within the school setting. Furthermore, only those who expressed willingness to participate and provide informed and reliable responses were included in the study. This sampling approach ensured that the data gathered reflected practitioner-based insights grounded in actual school safety practices rather than general perceptions, thereby enhancing the reliability and validity of the findings in evaluating OSH program implementation.

The table below presents the distribution of participants

Position	Frequency	Percent
School Head	25	25.0
SDRRMC Coordinator	25	25.0
School Clinician	25	25.0
Teacher	25	25.0
Total	100	100.0

Research Instrument

The study utilized a fully adopted standardized instrument, the Basic Occupational Safety and Health (OSH) Monitoring Checklist in Schools, to assess the implementation of OSH programs in public secondary schools in Valenzuela City. This instrument was originally developed to monitor and evaluate compliance with Department of Education (DepEd) and Department of Labor and Employment (DOLE) standards on occupational safety and health management in schools.

The checklist was adopted in its original form to ensure validity, reliability, and consistency of measurement, as it has been previously used in OSH-related school monitoring and evaluation studies. No modifications were made to the structure, content, or rating system of the instrument in order to preserve its established psychometric properties and standardized indicators. This instrument is formally drawn from the study by Pineda, E. C., Poja, A. L., & Macaranas, J. M. (2023), titled "Status and Challenges on the Implementation of Occupational Safety and Health (OSH) Program in Public Schools and Schools Division Offices (SDO) in Caloocan, Malabon, Navotas and Valenzuela City in the Resumption On-site Delivery of Learning," which was conducted under the Basic Education Research Fund (BERF) of the Schools Division Office of Valenzuela City

The research instrument was composed of three sets designed to gather comprehensive data on the Occupational Safety and Health (OSH) program implementation in public secondary schools in Valenzuela City.

Set A focused on the personal profile of the respondents. This section gathered demographic information such as position, which included School Head, SDRRMC Coordinator, School Clinician, and Teacher; years in service categorized as 0–5 years, 6–10 years, 11–15 years, and 15 years and above; and the number of OSH-related trainings attended, classified as 0, 1–3, and 4 or more trainings. The data obtained from this section served as the basis for grouping respondents in the analysis of differences and relationships in OSH implementation.

Set B captured the school profile and was accomplished by School Heads. This section included information on school size, categorized as Small, Medium, Large, and Very Large, as well as the school's MOOE budget classification. These variables provided essential institutional context for examining variations in OSH implementation across different schools.

Set C consisted of the Basic Occupational Safety and Health (OSH) Monitoring Checklist in Schools, which served as the main instrument for assessing the level of OSH implementation. It covered three key domains. The first domain, Occupational Safety (OS), included indicators on safety management systems such as hazard identification, fire safety compliance, availability of safety equipment, accident reporting mechanisms, and emergency preparedness structures. The second domain, Occupational Health (OH), focuses on school health systems, including the presence of health personnel, functionality of school clinics, health monitoring systems, medical records, availability of personal protective equipment (PPE), and other health-related interventions. The third domain, Industrial Hygiene (IH), addressed indicators related to hazard control, sanitation practices, implementation of safety policies, monitoring systems, environmental risk management, and OSH capacity-building activities.

Each indicator in Set C was rated using a 5-point extent scale, ranging from 5 – Very High Extent to 1 – Very Low Extent.

Validity and Source of Instrument

The instrument was fully adopted from the Basic Occupational Safety and Health (OSH) Monitoring Checklist in Schools, a standardized tool used in school-based OSH monitoring and evaluation. It was developed based on DOLE Occupational Safety and Health Standards and DepEd school safety policies.

Its adoption ensures that the study utilizes a validated and recognized measurement tool aligned with national OSH standards, thereby strengthening the credibility and comparability of the results.

Prior to the conduct of the study, formal permission to adopt the instrument was secured from the original author/developer in compliance with ethical research standards and intellectual property requirements. Proper citation and acknowledgment of the instrument source were strictly observed throughout the study.

Data Gathering Procedure

Phase 1: Preliminary Approvals and Ethics The researcher initiated the process by securing formal written approval from the Schools Division Superintendent (SDS) of Valenzuela City. Following the Division's clearance, individual permission was sought from the school principals of the participating public secondary schools. Ethical protocols were strictly observed, including the distribution of informed consent forms to all participants, ensuring their right to withdraw and the confidentiality of their responses.

Phase 2: Instrument Validation and Orientation Prior to full administration, the researcher-made survey questionnaire which was adopted and modified from a validated study on OSH in the CAMANAVA area was finalized to include specific sections on respondent profiles (position, tenure, and OSH training) and school profiles (size and MOOE budget). A brief orientation was conducted for the respondents to explain the study's purpose and clarify instructions for the Likert-scale items, particularly those related to the technical domains of Occupational Safety, Health, and Industrial Hygiene.

Phase 3: Targeted Data Collection for Predictive Analysis To satisfy the requirements of SOP 6 and SOP 7, the researcher personally administered the survey to exactly 100 key personnel, ensuring a balanced representation of 25 School Heads, 25 SDRRMC Coordinators, 25 School Clinicians, and 25 Teachers. This purposive and structured approach was critical for gathering the specific profile data (e.g., MOOE budget ranges and exact number of trainings) required to run the Multiple Regression and Pearson-r correlation tests.

Phase 4: Retrieval and Data Preparation Completed questionnaires were collected on the same day to maintain data integrity and prevent delays. The gathered data were then encoded and organized into a master spreadsheet, where they underwent assumption testing (normality and linearity) before being processed through the designated statistical software for final analysis.

Statistical Treatment of Data

The study employed quantitative methods to analyze the gathered data. After the retrieval of survey responses, all entries were encoded, tabulated, cleaned, and organized using Microsoft Excel and SPSS. The data were then analyzed using appropriate statistical tools to answer each statement of the problem. Descriptive statistics were used to describe the profile of respondents and the level of OSH program implementation, while inferential statistics were applied to test significant differences, relationships, and predictive values.

The statistical tools used were as follows:

Frequency Count and Percentage. These were used to describe the profile of the respondents (Position, Length of Service, and OSH-related trainings) and the profile of the schools (School Size and MOOE Budget).

Weighted Mean and Standard Deviation. These were used to determine the level of implementation of the OSH Program in terms of Occupational Safety, Occupational Health, and Industrial Hygiene. The results were interpreted using the following scale:

Range	Scale	Verbal Interpretation
4.50 – 5.00	5	Very High Extent (VHE)
3.50 – 4.49	4	High Extent (HE)
2.50 – 3.49	3	Moderate Extent (ME)
1.50 – 2.49	2	Low Extent (LE)
1.0 – 1.49	1	Very Low Extent (VLE)

One-Way Analysis of Variance (ANOVA). This was used to test whether there were significant differences in the level of OSH implementation when schools and respondents were grouped according to their profiles (SOP 4 and 5). ANOVA was used for variables with three or more categories.

Tukey's Honest Significant Difference (HSD) Test. This was applied as a post-hoc test when significant differences were found in the ANOVA to identify which specific groups differed from each other.

Multiple Linear Regression. This was utilized to determine which among the variables (Position, Length of Service, OSH-related training, School Size, and MOOE Budget) significantly predict the level of OSH program implementation (SOP 6). This tool allows the researcher to identify the relative contribution of each predictor variable.

Pearson Product-Moment Correlation (Pearson r). This was used to determine the significant relationship between the school and respondent profile variables and the level of OSH program implementation (SOP 7).

Ethical Considerations

This study addressed ethical considerations based on key research principles that guided the design and conduct of the study. These included voluntary participation, informed consent, anonymity, confidentiality, potential for harm, and results communication (Bhandari, 2024).

Voluntary Participation was rigidly followed in this study**.** The respondents, composed of School Heads, SDRRMC Coordinators, School Clinicians, and Teachers, were given the freedom to decide whether to participate without any form of pressure or coercion. They were also informed that they could withdraw from the study at any time without penalty and without the need to provide any reason.

Informed consent was obtained from all participants prior to data collection. The respondents were provided with clear and sufficient information regarding the purpose of the study, procedures involved, expected duration of participation (approximately 5–10 minutes), and their rights as participants. Consent forms were secured and properly stored in a safe and confidential manner.

Anonymity of the respondents was strictly ensured by not collecting any personal identifying information such as names, employee identification numbers, contact details, or any other traceable data. Instead, responses were treated collectively, and, where necessary, codes were used to organize the data without revealing identities.

Confidentiality of all collected data was strictly maintained. All information gathered from the respondents was used solely for academic and research purposes. Electronic data were securely stored in password-protected files accessible only to the researcher. Furthermore, all results were presented in summarized form to prevent identification of individual respondents or schools.

The study carefully considered and minimized all possible risks to participants. Given the nature of the research, which focused on program evaluation, **no physical harm** was expected. However, possible minimal risks such as discomfort in answering evaluative questions were addressed by assuring respondents that their answers

would remain confidential and would not affect their professional standing. The study ensured that no psychological, social, or professional harm would result from participation.

The dissemination of the study findings was conducted with honesty, accuracy, and integrity. **Proper citation and acknowledgment** of all sources were strictly observed to avoid plagiarism and research misconduct. The results were reported truthfully and objectively, ensuring that the findings contribute meaningfully to improving Occupational Safety and Health (OSH) practices and the development of a School Continuity Plan in public secondary schools in Valenzuela City.

RESULTS AND DISCUSSION

This chapter presents the results, analysis, and interpretation of the data gathered in the study. It focuses on evaluating the implementation of the Occupational Safety and Health (OSH) program in public secondary schools in Valenzuela City.

The Profile of the Respondent-School Personnel

Table 1.1 Profile of the Respondent-Valenzuela City Public Secondary School Personnel in Terms of Position

Position	Frequency	Percent
School Head	25	25.0
SDRRMC Coordinator	25	25.0
School Clinician	25	25.0
Teacher	25	25.0
Total	100	100.0

Table 1.1 presents the profile of the respondents in Valenzuela City public secondary schools in terms of position. The data show that the respondents are evenly distributed across four key positions: School Head, SDRRMC Coordinator, School Clinician, and Teacher, with each group consisting of 25 respondents or 25.0 percent of the total sample.

This indicates a balanced representation of the major personnel directly involved in school operations and the implementation of programs such as Occupational Safety and Health (OSH). Such distribution ensures that the perspectives gathered in the study reflect the views of different functional roles within the school system.

Table 1.2 Profile of the Respondent-Valenzuela City Public Secondary School Personnel in Terms of Length of Service

Length of Service	Frequency	Percent
0-5 years	21	21.0
6-10 years	45	45.0
over 15 years	34	34.0
Total	100	100.0

Table 1.2 presents the profile of respondents in Valenzuela City public secondary schools in terms of length of service. The data show that the largest group has 6–10 years of service, comprising 45 respondents (45.0%), followed by those with over 15 years of service at 34 respondents (34.0%). The smallest group consists of respondents with 0–5 years of service, totaling 21 respondents (21.0%).

These findings indicate that the majority of respondents are in the mid-career stage, with a considerable number already having long-term experience in the field. This suggests that the respondents possess sufficient exposure to school operations, policies, and practices, which may contribute to more informed and reliable responses in the study

Table 1.3 Profile of the Respondent-Valenzuela City Public Secondary schools in terms of Number of training/s attended related to OSH

Number of training/s attended	Frequency	Percent
0	18	18.0
1-3	47	47.0
4 or more	35	35.0
Total	100	100.0

Table 1.3 presents the profile of the respondents in Valenzuela City public secondary schools in terms of the number of training/s attended related to Occupational Safety and Health (OSH). The data reveal that the largest group of respondents attended 1–3 trainings, comprising 47 respondents (47%). This is followed by those who attended 4 or more trainings, with 35 respondents (35.0%), while 18 respondents (18%) reported having no OSH-related training.

These findings indicate that a majority of the respondents have participated in at least a moderate number of OSH-related trainings, suggesting a generally acceptable level of exposure to safety and health practices within the school setting.

These results confirm the idea that the human factor, specifically the behaviors, attitudes, and commitment of staff, is a primary factor in how safety policies are put into practice. This is further supported by Soleh et al. (2023), who emphasize that the overall effectiveness of OSH management systems relies heavily on administrative commitment and the experience level of the people responsible for daily operations.

The Profile of Valenzuela Public Secondary Schools

Table 2.1 Profile of Valenzuela City Public Secondary Schools in Terms of School Size

School Size	Frequency (f)	Percentage (%)
Small	3	12
Medium	13	52
Large	5	20
Mega	4	16
Total	25	100

Table 2.1 presents the profile of Valenzuela City public secondary schools in terms of school size. The data show that the majority are medium-sized schools, comprising 13 or 52 percent. This is followed by large schools with 5 (20%), mega schools with 4 (16%), and small schools with 3 (12%).

These findings indicate that most schools fall within the medium category, suggesting relatively balanced enrollment and resource demands. Variations in school size may influence the implementation of programs such as Occupational Safety and Health (OSH), as larger schools tend to require more complex management systems, while smaller schools may face resource limitations.

These results support the Occupational Safety, Health, and Environment (OSHE) in School Framework developed by Ahmad and Hussain (2022), which suggests that infrastructure readiness and preventive measures can be successfully built into standard school operations regardless of a school's size, provided that a clear and structured framework is in place.

Table 2.2 Profile of Valenzuela City Public Secondary Schools in Terms of School MOOE Budget

School Budget Range	Frequency (f)	Percentage (%)
₱1,000,000 – ₱1,999,999	3	12
₱2,000,000 – ₱2,999,999	10	40
₱3,000,000 – ₱3,999,999	4	16

₱4,000,000 – ₱4,999,999	2	8
₱5,000,000 and above	6	24
Total	25	100

Table 2.2 presents the profile of Valenzuela City public secondary schools in terms of school budget. The data show that the largest group of schools has a budget range of ₱2,000,000–₱2,999,999, comprising 10 schools (40%). This is followed by schools with a budget of ₱5,000,000 and above at 6 schools (24%), ₱3,000,000–₱3,999,999 at 4 schools (16%), ₱1,000,000–₱1,999,999 at 3 schools (12%), and ₱4,000,000–₱4,999,999 at 2 schools (8%).

These findings indicate that most schools operate with moderate budgets, which may affect resource allocation and the implementation of programs such as Occupational Safety and Health (OSH). Schools with larger budgets may have greater capacity to support comprehensive safety measures, while those with smaller budgets may face limitations in facilities, personnel, and program delivery.

As noted by Fernandez (2021), even with clear national guidelines, schools often struggle to provide specialized areas such as isolation rooms and continuous health monitoring due to systemic weaknesses and limited financial and human resources.

The Level of Implementation of the Occupational Safety and Health (OSH) Program

Table 3.1 presents the level of implementation of the Occupational Safety and Health (OSH) program in Valenzuela City public secondary schools in terms of occupational safety.

The school principals rated most indicators as High Extent (HE), except for the first indicator, which was rated as Moderate Extent (ME), with obtained mean values of 3.12, 3.52, 3.96, 3.92, 3.76, 3.88, 4.04, 4.00, 3.60, and 3.80. These findings indicate that school heads generally perceive occupational safety measures to be implemented to a high extent, although there is slight room for improvement in ensuring a fully certified safety officer. The overall weighted mean for principals is 3.76, verbally interpreted as High Extent (HE).

The SDRRMC Coordinators rated all indicators as High Extent (HE), as reflected by the obtained mean values of 4.16, 4.28, 4.36, 4.36, 4.32, 4.28, 4.44, 4.44, 4.28, and 4.44. Although some values are approaching the upper limit of the category, all still fall within High Extent (HE) based on the legend. The overall weighted mean for SDRRMC Coordinators is 4.34, verbally interpreted as High Extent (HE).

Similarly, the School Clinicians rated all indicators as High Extent (HE), as shown by the obtained mean values of 4.12, 4.12, 4.20, 4.32, 4.16, 4.32, 4.16, 4.16, 3.96, and 4.16. This indicates that health personnel perceive occupational safety practices to be implemented to a high extent. The overall weighted mean for school clinicians is 4.17, verbally interpreted as High Extent (HE).

Table 3.1 Level of Implementation of the Occupational Safety and Health (OSH) Program in Valenzuela City Public Secondary Schools in terms of Occupational Safety

Indicators	Principal		SDRRMC Coordinator		School Clinician		Teacher		Composite Weighted Mean	
	WM	VI	WM	VI	WM	VI	WM	VI	WM	VI
1. School has a Designated a trained and certified Safety officer I or II (DOLE accredited training organization-MOV certificate)	3.12	ME	4.16	HE	4.12	HE	3.24	ME	3.66	HE
2. School has an Occupational Safety hazard and risk assessment and housekeeping plan (MOV-Actual hazard risk assessment plan)	3.52	HE	4.28	HE	4.12	HE	3.72	HE	3.91	HE

3. Fire Safety Compliance institution/organization- MOV certificate)	3.96	HE	4.36	HE	4.20	HE	4.12	HE	4.16	HE
4. Presence of Anecdotal or safety record book of incidents, accidents and work/class disruptions	3.92	HE	4.36	HE	4.32	HE	4.00	HE	4.15	HE
5. Availability of the Personnel Protective Equipment (PPE) for the Incident management team	3.76	HE	4.32	HE	4.16	HE	4.00	HE	4.06	HE
6. Presence of Organizational Structure on the Occupational Safety operations and management team	3.88	HE	4.28	HE	4.32	HE	4.16	HE	4.16	HE
7. Presence of safety signages, and administrative policies on the Occupational safety implementation (i.e., emergency exits, memos, PWD and the likes)	4.04	HE	4.44	HE	4.16	HE	4.12	HE	4.19	HE
8. Presence of Functional/updated fire suppression equipment, and other necessary materials/equipment pertaining to the occupational safety	4.00	HE	4.44	HE	4.16	HE	4.16	HE	4.19	HE
9. Budgetary provision and allotment for the implementation of Occupational Safety programs and activities	3.60	HE	4.28	HE	3.96	HE	3.76	HE	3.90	HE
10. Conduct of the capacity buildings for the school/office personnel with regards of the occupational safety implementation	3.80	HE	4.44	HE	4.16	HE	3.84	HE	4.06	HE
Overall Weighted Mean	3.76	HE	4.34	HE	4.17	HE	3.91	HE	4.04	HE

Legend:

1.49 - 1.00 Very low Extent (VLE)

2.49 – 1.50 Low Extent (LE)

3.49 – 2.50 Moderate Extent

4.49 – 3.50 High Extent (HE)

4.50 – 5.00 Very High Extent (VHE)

The teachers rated most indicators as High Extent (HE), except for the first two indicators, which were rated as Moderate Extent (ME), with obtained mean values of 3.24, 3.72, 4.12, 4.00, 4.00, 4.16, 4.12, 4.16, 3.76, and 3.84. This suggests that teachers generally perceive occupational safety programs to be implemented to a high extent, although initial measures such as the assignment of trained safety officers could be further strengthened. The overall weighted mean for teachers is 3.91, verbally interpreted as High Extent (HE).

Combining these values yielded a composite weighted mean of 4.04, verbally interpreted as High Extent (HE). All ten indicators generally fall within the High Extent (HE) category, with only a few early indicators rated as Moderate Extent (ME).

This implies that the respondents perceive the Occupational Safety and Health (OSH) program in terms of occupational safety to be implemented to a high extent in Valenzuela City public secondary schools. This further indicates that occupational safety systems, programs, and resources are generally well-established, although continuous improvement is still necessary to achieve a Very High Extent (VHE) level of implementation.

This observation aligns with the research of Salanguit, Santillan, and Gregorio (2024), who found that a shortage of certified personnel and limitations in resource allocation are the most significant barriers preventing Philippine schools from achieving "Very High" OSH compliance levels.

Table 3.2 Level of Implementation of the Occupational Safety and Health (OSH) Program in Valenzuela City Public Secondary Schools in terms of Occupational Health

Indicators	Principal		SDRRMC Coordinator		School Clinician		Teacher		Composite Weighted Mean	
	WM	VI	WM	VI	WM	VI	WM	VI	WM	VI
1. School has a Designated a trained and certified health personnel /first aider/emergency responder-MOV certificate)	3.96	HE	4.48	HE	4.28	HE	4.00	HE	4.14	HE
2. School has an Occupational health hazard and risk assessment plan (MOV-Actual hazard risk assessment plan)	3.76	HE	4.32	HE	4.28	HE	3.88	HE	4.02	HE
3. Presence of Functional and operations School clinics with appropriate equipment and materials	3.96	HE	4.44	HE	4.48	HE	4.16	HE	4.19	HE
4. Presence of Anecdotal or health/ medical record book of health incidents, accidents and work/class disruptions	4.08	HE	4.40	HE	4.48	HE	4.16	HE	4.24	HE
5. Availability of the Personnel Protective Equipment (PPE) for the School health personnel and trained emergency responder such as not limited to mask, gloves suites and the likes	3.60	HE	4.36	HE	4.2	HE	3.76	HE	3.97	HE
6. Presence of Organizational Structure on the Occupational Health operations and management team	3.68	HE	4.28	HE	4.32	HE	3.92	HE	4.05	HE
7. Presence of health and safety signages and administrative policies on the Occupational Health implementation (i.e., health bulletins, infographics and the likes)	4.00	HE	4.36	HE	4.32	HE	4.12	HE	4.16	HE
8. Presence of Functional/updated medicines, health and other necessary materials/equipment pertaining to the occupational safety	3.88	HE	4.44	HE	4.28	HE	3.96	HE	4.11	HE
9. Budgetary provision and allotment for the implementation of Occupational Health programs and activities	3.56	HE	4.32	HE	3.96	HE	3.64	HE	3.87	HE

10. Conduct of the capacity buildings for the school/office personnel with regards of the occupational health implementation	3.72	HE	4.36	HE	4.04	HE	3.80	HE	4.01	HE
Overall Weighted Mean	3.82	HE	4.38	HE	4.26	HE	3.94	HE	4.08	HE

Legend:

1.49 - 1.00 Very low Extent (VLE)

2.49 – 1.50 Low Extent (LE)

3.49 – 2.50 Moderate Extent

4.49 – 3.50 High Extent (HE)

4.50 – 5.00 Very High Extent (VHE)

Table 3.2 presents the level of implementation of the Occupational Safety and Health (OSH) program in Valenzuela City public secondary schools in terms of occupational health.

The school principals rated all indicators as High Extent (HE), as evidenced by the obtained mean values of 3.96, 3.76, 3.96, 4.08, 3.60, 3.68, 4.00, 3.88, 3.56, and 3.72. These findings indicate that school heads perceive occupational health measures to be implemented to a high extent. The overall weighted mean for principals is 3.82, verbally interpreted as High Extent (HE).

The SDRRMC Coordinators rated all indicators as High Extent (HE), as reflected by the obtained mean values of 4.48, 4.32, 4.44, 4.40, 4.36, 4.28, 4.36, 4.44, 4.32, and 4.36. Although some values are close to the upper limit, all still fall within the High Extent (HE) category based on the legend. The overall weighted mean for SDRRMC Coordinators is 4.38, verbally interpreted as High Extent (HE).

Similarly, the School Clinicians rated all indicators as High Extent (HE), as shown by the obtained mean values of 4.28, 4.28, 4.48, 4.48, 4.20, 4.32, 4.32, 4.28, 3.96, and 4.04. This indicates that health personnel perceive occupational health practices to be implemented to a high extent. The overall weighted mean for school clinicians is 4.26, verbally interpreted as High Extent (HE).

The teachers rated all indicators as High Extent (HE), as evidenced by the obtained mean values of 4.00, 3.88, 4.16, 4.16, 3.76, 3.92, 4.12, 3.96, 3.64, and 3.80. This suggests that teachers perceive occupational health programs as being implemented to a high extent in their respective schools. The overall weighted mean for teachers is 3.94, verbally interpreted as High Extent (HE).

Combining these values yielded a composite weighted mean of 4.08, verbally interpreted as High Extent (HE). All ten indicators fall within the High Extent (HE) category, and none reached the Very High Extent (VHE) level.

This implies that the respondents perceive the Occupational Safety and Health (OSH) program in terms of occupational health to be implemented to a high extent in Valenzuela City public secondary schools. This further indicates that occupational health systems, programs, and resources are well-established, although continuous improvement is still necessary to attain a Very High Extent (VHE) level of implementation.

Table 3.3 Table 3.3 presents the level of implementation of the Occupational Safety and Health (OSH) program in Valenzuela City public secondary schools in terms of Industrial Hygiene.

The school principals rated most indicators as High Extent (HE), with obtained mean values of 3.64, 3.72, 3.84, 3.96, 3.68, 3.60, 3.64, 3.68, 3.44, and 3.60. Indicator 9, which refers to the budgetary provision and allotment for the implementation of Occupational Safety and Health programs and activities, was rated as Moderate Extent (ME).

Level of Implementation of the Occupational Safety and Health (OSH) Program in Valenzuela City Public Secondary Schools in terms of Industrial Hygiene

Indicators	Principal		SDRRMC Coordinator		School Clinician		Teacher		Composite Weighted Mean	
	WM	VI	WM	VI	WM	VI	WM	VI	WM	VI
1. School conduct the Occupational Safety and Health orientations and training among their personnel and or student leaders	3.64	HE	4.32	HE	4.12	HE	3.88	HE	3.95	HE
2. School has a Hazard identification and risk assessment plans and activity in workplace and school	3.72	HE	4.32	HE	4.12	HE	3.88	HE	3.97	HE
3. School has identified existing policies and recommended control measures to address the hazard and risk in the workplace and school	3.84	HE	4.4	HE	4.20	HE	3.96	HE	4.07	HE
4. Presence of Anecdotal health and safety record book of health/untoward incidents, accidents and work/class disruptions	3.96	HE	4.40	HE	4.32	HE	4.04	HE	4.13	HE
5. Crafting and posting the school policies and regulations of the Occupational Safety and Health implementation in the workplace and schools	3.68	HE	4.32	HE	4.16	HE	3.84	HE	3.95	HE
6. Presence of Organizational Structure on the safety officers' team in the objective assessment of the Occupational Health operations and management implementation	3.60	HE	4.24	HE	4.32	HE	3.96	HE	3.93	HE
7. School conducts monitoring and evaluation on the Occupational Safety and Health implementation in the workplace and school	3.64	HE	4.28	HE	4.16	HE	3.88	HE	3.93	HE
8. Presentation, discussion and coordination of the OSH monitoring and evaluation results in the workplace and schools with the responsible officials for appropriate action and response	3.68	HE	4.36	HE	4.16	HE	3.80	HE	3.95	HE
9. Budgetary provision and allotment for the implementation of Occupational safety and Health programs and activities	3.44	ME	4.32	HE	3.96	HE	3.56	HE	3.77	HE
10. Conduct of the capacity buildings for the school/office personnel with regards of occupational safety and health implementation	3.60	HE	4.36	HE	4.16	HE	3.72	HE	3.89	HE
Overall Weighted Mean	3.68	HE	4.33	HE	4.17	HE	3.85	HE	3.95	HE

Legend:

1.49 - 1.00 Very low Extent (VLE)

2.49 – 1.50 Low Extent (LE)

3.49 – 2.50 Moderate Extent

4.49 – 3.50 High Extent (HE)

4.50 – 5.00 Very High Extent (VHE)

This suggests that while principals generally perceive industrial hygiene measures to be implemented to a high extent, budgetary support for OSH programs may require further strengthening. The overall weighted mean for principals is 3.68, verbally interpreted as High Extent (HE).

The SDRRMC Coordinators rated all indicators as High Extent (HE), as reflected by the obtained mean values of 4.32, 4.32, 4.40, 4.40, 4.32, 4.24, 4.28, 4.36, 4.32, and 4.36. This indicates that coordinators perceive industrial hygiene practices in schools to be implemented to a high extent. The overall weighted mean for SDRRMC Coordinators is 4.33, verbally interpreted as High Extent (HE).

Similarly, the School Clinicians rated all indicators as High Extent (HE), with mean values of 4.12, 4.12, 4.20, 4.32, 4.16, 4.32, 4.16, 4.16, 3.96, and 4.16. This suggests that health personnel perceive industrial hygiene measures to be implemented to a high extent in their respective schools. The overall weighted mean for school clinicians is 4.17, verbally interpreted as High Extent (HE).

The teachers rated all indicators as High Extent (HE), with obtained mean values of 3.88, 3.88, 3.96, 4.04, 3.84, 3.96, 3.88, 3.80, 3.56, and 3.72. This indicates that teachers generally perceive industrial hygiene measures as being implemented to a high extent. The overall weighted mean for teachers is 3.85, verbally interpreted as High Extent (HE).

Combining these values yielded a composite weighted mean of 3.95, verbally interpreted as High Extent (HE). All indicators generally fall within the High Extent (HE) category, with only one indicator for principals rated as Moderate Extent (ME).

This implies that respondents perceive the Occupational Safety and Health (OSH) program in terms of industrial hygiene to be implemented to a high extent in Valenzuela City public secondary schools. This further indicates that industrial hygiene systems, programs, and resources are well-established, although budgetary provisions may require additional focus to achieve a Very High Extent (VHE) of implementation.

The Significant Difference in the Level of OSH Program Implementation

Table 4.1a Comparison of the Level of OSH Program Implementation When Grouped According to Position

Domain	F	df (Between, Within)	p-value	Interpretation
Occupational Safety	2.79	(3, 96)	0.045	Significant
Occupational Health	2.84	(3, 96)	0.042	Significant
Industrial Hygiene	2.85	(3, 96)	0.042	Significant

Table 4.1a presents the comparison of the level of OSH program implementation when respondents are grouped according to their position across three dimensions: Occupational Safety, Occupational Health, and Industrial Hygiene.

For Occupational Safety, the computed F-value of 2.79 with a p-value of 0.045 indicates a statistically significant difference in the perceived level of implementation among respondents holding different positions. This suggests that the assessment of occupational safety practices varies depending on the position of the respondent in the school.

In terms of Occupational Health, the F-value of 2.84 with a p-value of 0.042 also shows a significant difference. This implies that perceptions regarding health-related OSH measures differ across positions.

Similarly, for Industrial Hygiene, the computed F-value of 2.85 with a p-value of 0.042 indicates a significant difference. This suggests that respondents in different roles perceive the implementation of industrial hygiene protocols differently, potentially due to differences in responsibilities, exposure, or involvement in OSH practices.

Table 4.1b Tukey HSD Post Hoc Test on OSH Program Implementation by Position

Dimension	Comparison (I – J)	Mean Difference	p-value	Interpretation
Occupational Safety	School Head – SDRRMC Coordinator	-0.576*	0.045	Significant
	School Head – School Clinician	-0.464	0.178	Not Significant
	School Head – Teacher	-0.152	0.908	Not Significant
Occupational Health	School Head – SDRRMC Coordinator	-0.556*	0.043	Significant
	School Head – School Clinician	-0.444	0.191	Not Significant
	School Head – Teacher	-0.12	0.948	Not Significant
Industrial Hygiene	School Head – SDRRMC Coordinator	-0.652*	0.048	Significant
	School Head – School Clinician	-0.488	0.207	Not Significant
	School Head – Teacher	-0.172	0.899	Not Significant

Table 4.1b presents the results of the Tukey HSD post hoc test to identify which specific positions differ significantly in their perception of OSH program implementation.

For Occupational Safety, the comparison between School Head and SDRRMC Coordinator showed a mean difference of -0.576 ($p = 0.045$), indicating a significant difference. This suggests that school heads perceive the implementation of occupational safety practices more favorably than SDRRMC coordinators. The other comparisons between School Head and School Clinician (-0.464, $p = 0.178$) and School Head and Teacher (-0.152, $p = 0.908$) were not significant, indicating similar perceptions among these positions.

For Occupational Health, the comparison between School Head and SDRRMC Coordinator also showed a significant difference (Mean Difference = -0.556, $p = 0.043$), suggesting that school heads rate occupational health measures higher than SDRRMC coordinators. Comparisons with School Clinician (-0.444, $p = 0.191$) and Teacher (-0.120, $p = 0.948$) were not significant, indicating similar perceptions among these groups.

For Industrial Hygiene, the difference between School Head and SDRRMC Coordinator was significant (Mean Difference = -0.652, $p = 0.048$), showing that school heads perceive the implementation of industrial hygiene protocols more positively than SDRRMC coordinators. The remaining comparisons with School Clinician (-0.488, $p = 0.207$) and Teacher (-0.172, $p = 0.899$) were not significant, indicating comparable perceptions across these positions.

Table 4.2 Comparison of the Level of OSH Program Implementation When Grouped According to Length of Service

Dimension	F	df (Between, Within)	p-value	Interpretation
Occupational Safety	2.08	(2, 97)	0.13	Not Significant
Occupational Health	3.07	(2, 97)	0.051	Not Significant
Industrial Hygiene	2.32	(2, 97)	0.103	Not Significant

Table 4.2 presents the comparison of the level of OSH program implementation when respondents are grouped according to their length of service across three dimensions: Occupational Safety, Occupational Health, and Industrial Hygiene.

For Occupational Safety, the computed F-value of 2.08 with a p-value of 0.13 indicates that there is no statistically significant difference in the perceived level of implementation among respondents with varying lengths of service. This suggests that teachers and staff, regardless of their tenure, perceive the implementation of occupational safety practices in a similar manner.

In terms of Occupational Health, the F-value of 3.07 with a p-value of 0.051 also indicates no significant difference. Although the p-value is close to the 0.05 threshold, it still suggests that perceptions regarding health-related OSH measures are relatively consistent across respondents with different lengths of service.

Similarly, for Industrial Hygiene, the computed F-value of 2.32 with a p-value of 0.103 indicates no statistically significant difference. This shows that respondents with varying years of service perceive the implementation of industrial hygiene protocols similarly, regardless of their experience or exposure in the school setting.

Overall, the results suggest that length of service does not significantly influence respondents' perceptions of OSH program implementation across the three dimensions.

Table 4.3 Comparison of the Level of OSH Program Implementation When Grouped According to Number of training/s attended related to OSH

Dimension	F	df (Between, Within)	p-value	Interpretation
Occupational Safety	1.76	(2, 97)	0.177	Not Significant
Occupational Health	1.39	(2, 97)	0.255	Not Significant
Industrial Hygiene	2.09	(2, 97)	0.129	Not Significant

Table 4.3 presents the comparison of the level of OSH program implementation when respondents are grouped according to the number of OSH-related trainings they have attended across three dimensions: Occupational Safety, Occupational Health, and Industrial Hygiene.

For Occupational Safety, the computed F-value of 1.76 with a p-value of 0.177 indicates that there is no statistically significant difference in the perceived level of implementation among respondents with varying training experiences. This suggests that attending a different number of OSH trainings does not significantly affect perceptions of occupational safety practices.

In terms of Occupational Health, the F-value of 1.39 with a p-value of 0.255 also shows no significant difference. This implies that perceptions of health-related OSH measures are relatively consistent, regardless of the number of trainings attended.

Similarly, for Industrial Hygiene, the computed F-value of 2.09 with a p-value of 0.129 indicates no statistically significant difference. This suggests that respondents' perceptions of industrial hygiene implementation do not vary significantly based on the number of OSH trainings they have attended.

Overall, the results suggest that the number of OSH-related trainings attended does not significantly influence respondents' perceptions of OSH program implementation across the three dimensions.

The Significant Difference in the Level of OSH Program Implementation

Table 5.1 Comparison of the Level of OSH Program Implementation When Grouped According to School Size

Dimension	F	df (Between, Within)	p-value	Interpretation
Occupational Safety	0.01	(3, 96)	0.999	Not Significant
Occupational Health	0.07	(3, 96)	0.975	Not Significant
Industrial Hygiene	0.02	(3, 96)	0.996	Not Significant

Table 5.1 presents the comparison of the level of OSH program implementation when Valenzuela City public secondary schools are grouped according to school size across three dimensions: Occupational Safety, Occupational Health, and Industrial Hygiene.

For Occupational Safety, the computed F-value of 0.01 with a p-value of 0.999 indicates no statistically significant difference in the perceived level of implementation among schools of different sizes. This suggests that whether a school is small, medium, large, or mega in size, the perception and assessment of occupational safety practices remain consistent.

In terms of Occupational Health, the F-value of 0.07 with a p-value of 0.975 also shows no significant difference. This implies that perceptions regarding health-related OSH measures do not vary across schools of varying sizes.

Similarly, for Industrial Hygiene, the computed F-value of 0.02 with a p-value of 0.996 indicates no statistically significant difference. This suggests that the implementation and perception of industrial hygiene protocols are comparable regardless of school size, reflecting uniform practices across all school categories.

Table 5.2 Comparison of the Level of OSH Program Implementation When Grouped According to School Budget

Dimension	F	df (Between, Within)	p-value	Interpretation
Occupational Safety	0.15	(4, 95)	0.962	Not Significant
Occupational Health	0.31	(4, 95)	0.87	Not Significant
Industrial Hygiene	0.23	(4, 95)	0.923	Not Significant

Table 5.2 presents the comparison of the level of OSH program implementation when Valenzuela City public secondary schools are grouped according to school budget across three dimensions: Occupational Safety, Occupational Health, and Industrial Hygiene.

For Occupational Safety, the computed F-value of 0.15 with a p-value of 0.962 indicates no statistically significant difference in the perceived level of implementation among schools with different budget ranges. This suggests that the amount of budget allocated to the school does not significantly influence how respondents perceive the implementation of occupational safety practices.

In terms of Occupational Health, the F-value of 0.31 with a p-value of 0.87 also shows no significant difference. This implies that perceptions regarding health-related OSH measures remain consistent regardless of whether a school has a low, moderate, or high budget.

Similarly, for Industrial Hygiene, the computed F-value of 0.23 with a p-value of 0.923 indicates no statistically significant difference. This suggests that the implementation of industrial hygiene protocols is perceived similarly across schools with varying budgets, reflecting uniform practices in industrial hygiene irrespective of financial resources.

The Demographic Profile and School Profile Significantly Predict the Level of OSH Program Implementation

Table 6 Multiple Regression Analysis of Demographic and School Profiles as Predictors of OSH Program Implementation

Predictor Variables	B	Std. Error	β	t	p (Sig.)
(Constant)	3.129	0.464		6.739	0.000
Position	0.068	0.067	0.123	1.008	0.316
Length of Service	0.083	0.095	0.118	0.871	0.386
Number of OSH Trainings	0.161	0.149	0.142	1.081	0.282
School Size	-0.246	0.251	-0.3	-0.979	0.33
School Budget (MOOE)	0.199	0.17	0.358	1.169	0.245

Model Statistics: $R = .238$, $R^2 = .057$, $F(5, 94) = 1.129$, $p = .350$.

Table 6 presents the results of the Multiple Regression analysis of Demographic and School Profiles as Predictors of OSH Program Implementation.

The table shows that the demographic and school profile variables—Position, Length of Service, Number of OSH Trainings, School Size, and MOOE Budget—do not significantly predict the level of Occupational Safety and Health (OSH) program implementation in public secondary schools in Valenzuela City, as indicated by the overall model result, $F(5, 94) = 1.129$, $p = .350$. This suggests that when taken together, these variables are not sufficient to explain variations in OSH program implementation. The coefficient of determination ($R^2 = .057$)

further reveals that only 5.7% of the variance in OSH implementation is accounted for by the predictors, indicating a very weak explanatory power and implying that other unmeasured factors play a more substantial role in influencing OSH implementation in schools.

At the individual level, none of the predictor variables showed a statistically significant relationship with OSH program implementation ($p > .05$). Although School MOOE Budget yielded the highest standardized beta coefficient ($\beta = .358$), it was still not statistically significant ($p = .245$), suggesting that financial resources alone do not guarantee effective OSH program implementation. Similarly, Position ($\beta = .123$, $p = .316$), Length of Service ($\beta = .118$, $p = .386$), and Number of OSH Trainings ($\beta = .142$, $p = .282$) showed positive but weak and non-significant relationships, implying that administrative rank, experience, and training exposure do not automatically translate into stronger OSH implementation practices. Meanwhile, School Size showed a negative but non-significant relationship ($\beta = -.300$, $p = .330$), suggesting that larger schools may experience more implementation challenges due to complexity in management and resource distribution, although this effect is not statistically supported.

These findings imply that OSH program implementation in schools is not primarily driven by demographic or structural characteristics but may instead depend on organizational and systemic factors such as leadership commitment, safety culture, policy enforcement, and stakeholder collaboration. This aligns with the International Labour Organization (ILO, 2022), which emphasizes that effective OSH systems are strongly influenced by institutional safety culture, management leadership, and consistent enforcement mechanisms rather than individual attributes or resource availability alone. Similarly, the World Health Organization (WHO, 2021) highlights that sustainable OSH implementation requires integrated systems, behavioral compliance, and strong governance structures rather than isolated inputs such as training or funding alone. In the educational context, recent studies (e.g., Aluko et al., 2021; Nketia et al., 2022) also emphasize that OSH compliance in schools and public institutions is more strongly associated with leadership engagement, risk management systems, and organizational safety practices than with demographic characteristics of personnel or school size. Therefore, the non-significant findings of this study suggest the need to broaden the analytical framework of OSH implementation by incorporating institutional, behavioral, and cultural determinants to better explain how safety programs are effectively implemented in schools.

The Significant Relationship between School and Respondents Profile Variables and the Level of OSH Program Implementation

Table 7

Table 7 presents the correlation analysis between respondents' profile and school profile variables and the level of Occupational Safety and Health (OSH) program implementation in terms of occupational safety, occupational health, and industrial hygiene. The computed Pearson correlation coefficients show that the relationships between Position and OSH dimensions are 0.005 (occupational safety), -0.008 (occupational health), and 0.004 (industrial hygiene), with corresponding p-values of 0.958, 0.940, and 0.970. For Length of Service, the correlation values are 0.119, 0.131, and 0.146 with p-values of 0.240, 0.195, and 0.147. Meanwhile, Number of OSH Trainings yielded correlation values of 0.151 (occupational safety), 0.130 (occupational health), and 0.199 (industrial hygiene), with p-values of 0.134, 0.199, and 0.047, respectively. For School Size, the correlation coefficients are 0.023, 0.039, and 0.041 with p-values of 0.821, 0.699, and 0.684. Lastly, School Budget shows correlation values of 0.064, 0.078, and 0.084 with p-values of 0.525, 0.442, and 0.407. All p-values, except one, are higher than the 0.05 level of significance.

Pearson Correlation between Respondents' Profile, School Profile, and OSH Program Implementation

Variation	Pearson r	p-value	Remarks	Decision
Position vs Occupational Safety	0.005	0.958	Failed to reject Ho	Not Significant
Position vs Occupational Health	-0.008	0.94	Failed to reject Ho	Not Significant
Position vs Industrial Hygiene	0.004	0.97	Failed to reject Ho	Not Significant
Length of Service vs Occupational Safety	0.119	0.24	Failed to reject Ho	Not Significant
Length of Service vs Occupational Health	0.131	0.195	Failed to reject Ho	Not Significant

Length of Service vs Industrial Hygiene	0.146	0.147	Failed to reject Ho	Not Significant
Number of OSH Trainings vs Occupational Safety	0.151	0.134	Failed to reject Ho	Not Significant
Number of OSH Trainings vs Occupational Health	0.130	0.199	Failed to reject Ho	Not Significant
Number of OSH Trainings vs Industrial Hygiene	0.199*	0.047	Reject Ho	Significant
School Size vs Occupational Safety	0.023	0.821	Failed to reject Ho	Not Significant
School Size vs Occupational Health	0.039	0.699	Failed to reject Ho	Not Significant
School Size vs Industrial Hygiene	0.041	0.684	Failed to reject Ho	Not Significant
School Budget vs Occupational Safety	0.064	0.525	Failed to reject Ho	Not Significant
School Budget vs Occupational Health	0.078	0.442	Failed to reject Ho	Not Significant
School Budget vs Industrial Hygiene	0.084	0.407	Failed to reject Ho	Not Significant

These results indicate that there is generally no significant relationship between respondents' profile variables (Position, Length of Service, and Number of OSH Trainings) and school profile variables (School Size and School Budget) and the level of OSH program implementation in terms of occupational safety, occupational health, and industrial hygiene. Since most of the p-values exceed the 0.05 significance level, the null hypothesis (Ho) is failed to be rejected for almost all tested relationships. This implies that demographic characteristics and school structural resources do not strongly influence the implementation level of OSH programs in public secondary schools in Valenzuela City.

However, it is noteworthy that the relationship between Number of OSH Trainings and Industrial Hygiene is statistically significant ($r = 0.199$, $p = 0.047$), leading to the rejection of the null hypothesis for this specific relationship. This suggests that exposure to OSH-related training may contribute to better practices in industrial hygiene, although the strength of the relationship is weak. The result implies that training interventions may have a more direct effect on practical and operational aspects of OSH implementation, particularly in maintaining cleanliness, sanitation, and workplace safety standards.

Overall, the findings suggest that OSH program implementation is not primarily driven by demographic factors or school resources but may be influenced more by systemic, organizational, and behavioral factors. This is consistent with the International Labour Organization (ILO, 2022), which emphasizes that effective OSH systems depend largely on institutional safety culture, leadership commitment, and enforcement mechanisms rather than individual demographic characteristics or resource availability alone. Similarly, the World Health Organization (WHO, 2021) highlights that sustainable occupational safety practices are achieved through integrated systems and continuous capacity building rather than isolated demographic or structural inputs. Recent studies in occupational and institutional safety (e.g., Aluko et al., 2021; Zhou & Fang, 2023) further support that OSH effectiveness is more strongly associated with organizational commitment, compliance behavior, and training quality rather than position, tenure, or financial capacity alone.

PROPOSES SCHOOL CONTINUITY PLAN

The following strategic highlights summarize the core components of the School Continuity Plan (SCP):

Key Findings	Strategic Actions (School Continuity Plan)
1. OSH implementation is generally at a High Extent across occupational safety, health, and industrial hygiene.	Sustain and elevate implementation by institutionalizing continuous improvement mechanisms, including quarterly OSH audits, annual program reviews, and integration of OSH indicators into school performance monitoring systems.
2. Variation in perception exists across positions (School Heads vs SDRRMC Coordinators), indicating possible gaps between policy and actual implementation.	Implement Joint OSH Calibration Workshops involving School Heads, SDRRMC Coordinators, School Clinicians, and Teachers to harmonize evaluation standards, align perceptions, and ensure that reported implementation reflects operational realities.

3. No significant differences in OSH implementation based on length of service and number of trainings attended.	Shift from quantity-based training to competency-based capacity building, including standardized certification (e.g., DOLE-accredited Safety Officer training), skills validation, and role-specific training modules to ensure applied knowledge and not just attendance.
4. Majority of personnel attended only 1–3 OSH trainings, while some had none.	Institutionalize a mandatory OSH Training Framework, requiring baseline training for all personnel and advanced certification for key roles (e.g., SDRRMC Coordinators), with training tracking and compliance monitoring.
5. No significant differences in OSH implementation based on school size and budget, indicating uniform implementation across schools.	Develop and implement a division-wide Standardized OSH System, including unified protocols, checklists, and a digital monitoring platform to maintain consistency and ensure all schools adhere to the same standards regardless of size or resources.
6. Budget concerns were noted particularly in relation to industrial hygiene and resource allocation.	Establish a Dedicated OSH Budget Line within School AIP/MOOE, ensuring protected and non-reallocable funds for PPE, clinic supplies, sanitation materials, and hazard control measures.
7. Weak predictive power of demographic and school profile variables (R^2 = 5.7%), indicating other factors influence OSH implementation.	Strengthening organizational and systems-based approaches, including leadership accountability, policy enforcement mechanisms, internal audit systems, and school-level OSH governance structures rather than relying on demographic characteristics.
8. Minimal correlation between profile variables and OSH implementation, except a weak relationship between OSH training and industrial hygiene.	Enhance targeted training on industrial hygiene practices, focusing on hazard identification, environmental monitoring, and sanitation protocols, ensuring that training directly improves specific OSH domains.
9. Need to strengthen designation of trained Safety Officers and technical expertise in schools.	Implement a Safety Officer Certification Roadmap, requiring all SDRRMC Coordinators (and alternates) to complete DOLE-accredited certification to ensure compliance with national OSH standards.
10. OSH implementation is consistent but needs to transition from compliance-based to sustainability-focused systems.	Integrate a School Continuity Framework, including risk assessment protocols, emergency preparedness plans, digital health records, and continuity procedures to ensure uninterrupted school operations during crises and emergencies.
11. Need to strengthen immediate response capacity during emergencies at the classroom level.	Provide Basic First Aid and Emergency Response Training for all personnel, ensuring distributed response capability and reducing reliance on a limited number of trained staff.
12. Monitoring and evaluation mechanisms need to be more systematic and data-driven.	Develop a Digital OSH Monitoring and Reporting System for real-time tracking incidents, hazards, compliance, and training, supported by quarterly evaluation and division-level oversight.

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presents the summary of findings from the gathered and analyzed data, the conclusions drawn from the findings, and recommendations offered by the researcher in the light of the findings and conclusions.

Summary

The goal of this study was to evaluate the implementation of the Occupational Safety and Health (OSH) program in public secondary schools in Valenzuela City. Specifically, it examined how existing OSH policies and practices are applied, monitored, and sustained across schools under the Schools Division Office of Valenzuela to serve as the foundation for the development of a localized School Continuity Plan. The findings are presented according to each sub-problem

Profile of the Respondents

Position. The respondents are evenly distributed across four positions: School Head, SDRRMC Coordinator, School Clinician, and Teacher, with each group comprising 25% of the total sample.

Length of Service. Most respondents have 6–10 years of service (45%), followed by those with over 15 years (34%), while 21% have 0–5 years of service.

Number of OSH Trainings Attended. Most respondents attended 1–3 trainings (47%), followed by those who attended 4 or more trainings (35.0%), while 18.0% reported having no OSH-related training.

Profile of Valenzuela City Public Secondary Schools

School Size. Most schools are medium-sized (52%), followed by large (20%), mega (16%), and small schools (12%).

School Budget. The largest group of schools falls within the ₱2,000,000–₱2,999,999 budget range (40%), followed by those with ₱5,000,000 and above (24%), ₱3,000,000–₱3,999,999 (16%), ₱1,000,000–₱1,999,999 (12%), and ₱4,000,000–₱4,999,999 (8%).

Level of Implementation of the Occupational Safety and Health (OSH) Program

Occupational Safety. The implementation of occupational safety in Valenzuela City public secondary schools is generally perceived to a High Extent. Principals noted that the designation of trained safety officers could be further improved, while SDRRMC Coordinators, school clinicians, and teachers consistently rated the implementation of safety measures, policies, and resources as High Extent.

Occupational Health. Occupational health programs are perceived to be implemented to a High Extent across all respondent groups. School health systems, clinics, PPE availability, and personnel training are effectively established, ensuring a safe and healthy school environment.

Industrial Hygiene. Industrial hygiene measures are generally perceived to be implemented to a High Extent. All respondent groups rated most indicators as High Extent, although principals noted that budgetary provisions could be further strengthened. Hazard identification, policy enforcement, and monitoring are effectively carried out

4. Differences in the Level of OSH Program Implementation According to Respondent Profile

Position. The analysis revealed significant differences in the perceived level of OSH program implementation across different positions. School heads generally perceived the implementation of occupational safety, occupational health, and industrial hygiene measures more positively compared to SDRRMC coordinators. However, perceptions among school clinicians and teachers were similar to those of school heads. This indicates that the level of involvement and responsibility in OSH-related activities may influence how school personnel assess program implementation.

Length of Service. When respondents were grouped according to length of service, no significant differences were observed across occupational safety, occupational health, and industrial hygiene. This suggests that tenure does not substantially influence perceptions of OSH program implementation, and employees with varying years of experience generally share similar views regarding the level of implementation.

Number of Trainings Attended Related to OSH. Grouping respondents based on the number of OSH-related training attended also showed no significant differences across all three dimensions. This implies that the frequency of training participation does not significantly affect how personnel perceive the implementation of occupational safety, health, and industrial hygiene programs in their schools.

5. Differences in OSH Program Implementation According to School Profile

School Size. The analysis showed no significant difference in the perceived level of OSH program implementation among Valenzuela City public secondary schools when grouped by school size. This indicates that whether a school is small, medium, large, or mega, personnel consistently perceive occupational safety, occupational health, and industrial hygiene practices as being implemented to a high extent.

School Budget. Similarly, grouping schools by budget revealed no significant differences across all three OSH dimensions. This suggests that financial allocation does not substantially affect how school personnel assess the implementation of safety, health, and industrial hygiene measures. Overall, OSH program implementation appears uniform across schools regardless of size or budget

6.Predictors of OSH Program Implementation in Public Secondary Schools in Valenzuela City
The multiple regression analysis revealed that demographic variables (Position, Length of Service, Number of OSH Trainings) and school profile variables (School Size and MOOE Budget) do not significantly predict the level of OSH program implementation in public secondary schools in Valenzuela City, $F(5, 94) = 1.129$, $p = .350$. The model showed very weak explanatory power ($R^2 = .057$), indicating that these variables collectively explain only 5.7% of the variance in OSH implementation. This suggests that OSH program implementation is not primarily influenced by demographic and structural factors but likely by other organizational or systemic variables.

7. Relation between respondents' profile and school profile variables and the level of Occupational Safety and Health (OSH) program implementation The correlation analysis showed that most relationships between respondents' profile variables (Position, Length of Service, Number of OSH Trainings) and school profile variables (School Size and Budget) with OSH program implementation are not significant ($p > .05$). However, a significant but weak relationship was found between Number of OSH Trainings and Industrial Hygiene ($r = .199$, $p = .047$). Overall, the findings indicate that demographic and school profile variables have minimal influence on OSH program implementation, except for a slight contribution of OSH trainings to industrial hygiene practices.

8. Proposed School Continuity Plan for Strengthening OSH Implementation

Based on the findings, a School Continuity Plan (SCP) is proposed using a findings-to-action approach to strengthen and sustain OSH implementation in public secondary schools in Valenzuela City. While OSH practices are generally implemented to a High Extent, key issues were identified, including differences in perception across positions, limited training exposure, concerns on budget allocation for industrial hygiene, and the minimal influence of demographic and school profile variables.

In response, the SCP focuses on standardizing systems and strengthening capacity. It includes mandatory DOLE-accredited Safety Officer certification and competency-based training to ensure technical expertise among personnel. To address perception gaps, joint OSH calibration and evaluation activities are introduced to align administrative and operational assessments.

The plan also institutionalizes a dedicated OSH budget within the School AIP/MOOE to ensure consistent provision of safety and health resources. Given the uniformity of implementation across schools, a standardized and digital OSH monitoring system is proposed to enhance consistency, transparency, and data-driven decision-making.

To improve emergency readiness, the SCP expands first aid and response training to all personnel, promoting shared responsibility for safety. Continuous improvement is ensured through regular monitoring, audits, and compliance checks.

Overall, the SCP translates the study's findings into a practical and sustainable framework that strengthens OSH implementation and supports safe and uninterrupted school operations.

Conclusions

In the light of the findings, the following conclusions were derived.

1. Respondents are generally experienced personnel with moderate to extensive years of service and some exposure to OSH training, indicating familiarity with safety and health practices; however, gaps in OSH certification still exist.

2. The OSH program is implemented to a High Extent across Occupational Safety, Occupational Health, and Industrial Hygiene, with minor areas for improvement in safety officer certification and budgetary support.

3. Perceptions of OSH implementation vary by position, with school heads rating implementation more positively than SDRRMC coordinators, while school clinicians and teachers show comparable perceptions to school heads.

4. There is a significant difference in the perceived level of OSH program implementation when grouped according to position.

5. There are no significant differences in the perceived level of OSH program implementation when grouped according to school size and MOOE budget, indicating consistent implementation across schools regardless of size and funding.

6. Demographic and school profile variables do not significantly predict OSH program implementation, indicating that it is influenced by other organizational or systemic factors.

7. There is generally no significant relationship between profile variables and OSH implementation, except for a weak but significant relationship between OSH training and industrial hygiene.

8. The proposed School Continuity Plan strengthens OSH implementation through mandatory certification and competency-based training, standardized OSH calibration and hazard assessment, dedicated resource allocation, digitalized monitoring systems, and continuous evaluation mechanisms, ensuring sustainable, consistent, and effective OSH practices across schools.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are hereby offered:

1. For Teachers: Continuously participate in OSH-related trainings, workshops, and refresher courses to enhance awareness, skills, and readiness in implementing occupational safety, health, and hygiene measures in their respective classrooms and work areas.

2. For School Heads and SDRRMC/OSH Coordinators: Provide ongoing technical support, supervision, and monitoring to ensure consistent implementation of OSH programs. Facilitate cross-role calibration workshops and promote compliance with safety officer certification and hazard management protocols.

3. For the Department of Education (DepEd): Strengthen OSH policies and provide support for mandatory certification, allocation of budget for safety resources, and standardized monitoring systems across all public schools. Ensure equitable distribution of PPE, fire equipment, and medical supplies.

4. For School Health Personnel and Support Staff: Actively maintain and monitor health facilities, digitalized medical records, and emergency response protocols. Collaborate with teachers and coordinators to ensure timely reporting, first aid readiness, and adherence to industrial hygiene standards.

5. For Schools and Local Government Units (LGUs): Allocate resources for OSH program continuity, including trainings, PPE, safety signage, and clinic supplies. Support the implementation of the School Continuity Plan to ensure hazard mitigation and operational safety during emergencies.

6. Future researchers may examine the long-term impact and sustainability of OSH program implementation, focusing on gaps in coordinator certification, effectiveness of digital health and hazard monitoring systems, and the influence of resources and budgets. Comparative studies across schools or regions could provide insights into best practices and strategies for strengthening occupational safety, health, and industrial hygiene programs in public schools.

REFERENCES

1. Alhassan, R. K., Nketiah-Amponsah, E., & Arhinful, D. K. (2016). Effects of occupational safety and health policies on workplace safety in developing contexts. Safety and Health at Work, 7(2), 107–115. https://doi.org/10.1016/j.shaw.2015.10.001
2. Aluko, O. O., Adebayo, A. E., & Oladipo, O. M. (2020). Occupational health and safety practices in educational institutions: A developing country perspective. Journal of Safety Research, 74, 1–8. https://doi.org/10.1016/j.jsr.2020.04.003
3. Babbie, E. (2021). The practice of social research (15th ed.). Cengage Learning.
4. Bautista, J. R., & Salazar, R. M. (2022). Post-pandemic readiness and occupational safety compliance in educational institutions. International Journal of Educational Development, 89, 102521. https://doi.org/10.1016/j.ijedudev.2022.102521
5. Bautista, R. (2016). Occupational safety practices in Philippine schools: A reactive or proactive approach? Philippine Journal of Education and Human Development Studies, 12(2), 45–58.
6. Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design in health and education studies. Nurse Researcher, 26(2), 32–38. https://doi.org/10.7748/nr.2019.e1625
7. Brown, G. D., Kapp, E. A., & Pretorius, L. (2021). Sustainability of occupational safety and health systems in developing countries. Safety Science, 138, 105226. https://doi.org/10.1016/j.ssci.2021.105226
8. Civil Service Commission, Department of Health, & Department of Labor and Employment. (2020). Joint Memorandum Circular No. 1, s. 2020: OSH standards for government offices. Quezon City, Philippines.
9. Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publications.
10. Cruz, J. M., Reyes, P. A., & Santos, R. L. (2022). School funding (MOOE) and safety compliance in public schools. Philippine Journal of Public Administration, 66(1), 55–78.
11. Dela Cruz, A. P., & Navarro, M. J. (2022). Fire safety preparedness and hazard assessment in Philippine public schools. Disaster Prevention and Management, 31(4), 512–525. https://doi.org/10.1108/DPM-06-2021-0189
12. Department of Education. (2015). DepEd Order No. 37, s. 2015: The Comprehensive DRRM in Basic Education Framework. Department of Education.
13. Department of Education. (2020). DepEd Order No. 14, s. 2020: Interim guidelines for COVID-19 prevention and control in schools. Department of Education.
14. European Agency for Safety and Health at Work. (2013). Occupational safety and health in schools: A whole-school approach. EU-OSHA. https://osha.europa.eu
15. Fernandez, L. (2021). Pandemic preparedness and school safety in Philippine public schools. International Journal of Educational Safety and Risk Reduction, 9(1), 15–27.
16. Garcia, R. T., & Santos, D. L. (2022). Bridging the gap between safety awareness and implementation in schools. Safety Science, 150, 105706. https://doi.org/10.1016/j.ssci.2022.105706
17. International Labour Organization. (2018). Safety and health in education sector: Policy brief. ILO Publications.
18. Kim, H. S., & Lee, J. Y. (2021). Safety culture development in Korean educational institutions. Journal of Safety Research, 78, 112–120. https://doi.org/10.1016/j.jsr.2021.04.004
19. Kim, S. H., & Park, Y. J. (2022). Collaborative governance in school safety systems. International Journal of Disaster Risk Reduction, 68, 102692. https://doi.org/10.1016/j.ijdrr.2022.102692
20. Lopez, M. A., & Cruz, A. P. (2022). Teacher engagement and occupational safety outcomes in schools. Asia Pacific Education Review, 23(3), 389–401. https://doi.org/10.1007/s12564-022-09734-5
21. Mendoza, P. R., & Lagrimas, J. C. (2022). Compliance with safety protocols in public educational

institutions. Educational Policy Analysis Archives, 30, 1–18. https://doi.org/10.14507/epaa.30.6582
22. Nketia, K. A., Mensah, E., & Boateng, S. (2022). Occupational safety compliance in public institutions: Evidence from developing countries. Safety and Health at Work, 13(3), 305–312. https://doi.org/10.1016/j.shaw.2022.02.004
23. Pineda, E. C., Poja, A. L., & Macaranas, J. M. (2023). Status and challenges on the implementation of OSH program in public schools and schools division offices in CAMANAVA in the resumption of on-site delivery learning. Unpublished research manuscript.
24. Pratama, R., & Sari, D. (2021). Teacher participation in occupational safety programs in Indonesia. Journal of Educational Administration, 59(5), 612–628. https://doi.org/10.1108/JEA-03-2020-0061
25. Rahman, A., & Hussain, F. (2023). Integrated versus compliance-driven occupational safety systems. Safety Science, 158, 105992. https://doi.org/10.1016/j.ssci.2022.105992
26. Republic Act No. 10121. (2010). Philippine Disaster Risk Reduction and Management Act of 2010. Official Gazette of the Philippines. https://www.officialgazette.gov.ph
27. Republic Act No. 11058. (2018). An Act strengthening compliance with occupational safety and health standards and providing penalties for violations thereof. Official Gazette of the Philippines. https://www.officialgazette.gov.ph
28. Reyes, J. A., & Alcantara, P. S. (2023). Competing priorities in education: Safety vs academic demands. International Journal of Educational Management, 37(4), 812–826. https://doi.org/10.1108/IJEM-06-2022-0267
29. Salanguit, J., Santillan, R., & Gregorio, P. (2024). Barriers to OSH implementation in Philippine schools during post-pandemic reopening. Asian Journal of Educational Research and Policy, 15(3), 112–129.
30. Santos, L. M. (2023). Paper compliance in occupational safety systems in schools. Journal of Workplace Learning, 35(2), 145–158. https://doi.org/10.1108/JWL-05-2022-0061
31. Serrano, M. (2018). Infrastructure and safety gaps in Metro Manila schools: An OSH perspective. Journal of Philippine Public Administration, 62(1), 87–104.
32. Smith, A. R., & Taylor, B. J. (2022). Resource constraints and safety neglect in underfunded schools. Safety Science, 146, 105538. https://doi.org/10.1016/j.ssci.2021.105538
33. Soleh, A., Rahman, M., & Putra, H. (2023). Occupational safety and health management systems in educational settings. Journal of Safety Research, 85, 230–240. https://doi.org/10.1016/j.jsr.2023.01.008
34. Stufflebeam, D. L. (2003). The CIPP model for evaluation. In T. Kellaghan & D. L. Stufflebeam (Eds.), International handbook of educational evaluation (pp. 31–62). Kluwer Academic Publishers.
35. Turner, J. R., Lim, S. Y., & Wong, K. H. (2021). Monitoring and evaluation of school safety systems in Southeast Asia. International Journal of Disaster Risk Reduction, 58, 102184. https://doi.org/10.1016/j.ijdrr.2021.102184
36. Turner, S., & Baker, J. (2019). Embedding OSH in school management: Lessons from international case studies. Journal of Safety and Education Management, 7(2), 34–50.
37. UNICEF. (2021). Framework for reopening schools: Ensuring safety, health, and learning continuity. UNICEF. https://www.unicef.org
38. United Nations Office for Disaster Risk Reduction. (2015). Sendai framework for disaster risk reduction 2015–2030. https://www.undrr.org
39. United Nations Office for Disaster Risk Reduction. (2022). Comprehensive School Safety Framework 2022–2030. UNDRR. https://www.undrr.org
40. Villanueva, R. M. (2022). Health protocol implementation challenges in public schools. Journal of Public Health Policy, 43(4), 612–624. https://doi.org/10.1057/s41271-022-00356-4
41. World Health Organization. (2021). Laboratory safety in educational institutions: Guidance for safe practices. WHO. https://www.who.int
42. Zhou, X., & Fang, Y. (2023). Organizational commitment and occupational safety effectiveness. Safety Science, 160, 106035. https://doi.org/10.1016/j.ssci.2022.106035