

Critical Success Factors In the Implementation of OSH Management System in Public Institutions of Higher Education in Malaysia

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THE FUTURE OF WORK



Table of contents

01



Study Background

Critical Success Factors

02



Problem Statement and Study Justification

03



Objectives and methodology

04



Results, Discussion and Conclusions



Background of Study

- **OSHMS overcome workplace hazards**
 - ↓ 67% & 10% fatal accidents 2006-2011 in top 100 South Korean construction companies (Yoon et. al, 2013)
 - Protect reputation & human capital (Fernández-Muñiz et al. 2012).
- **Organisation is synthesis of social & technical systems**
- **Safe place, safe person & safe systems**
 - Hazard management strategies (Makin and Winder, 2008)
 - Critical Success Factors (CSF) – when crucial areas satisfactory, successful performance (Rockart, 1979)
- **Barriers of OSHMS**
 - Lack management commitment & employee participation (Goh et al, 2012; Robson et al, 2007)



Problem Statement



20 Local universities in Malaysia, **~5 with certifications**; have system of work in compliance with Section 15 (OSHA 1994) as statutory body; OSH programs available, not overall OSHMS; lack evaluation & continuous assessment;



~30,000 employees with various stakeholders; exposed to high-risk activities - chemicals, radiation, biological, ergonomics, mental stress (Hermann & Rockoff, 2012); needs OSHMS

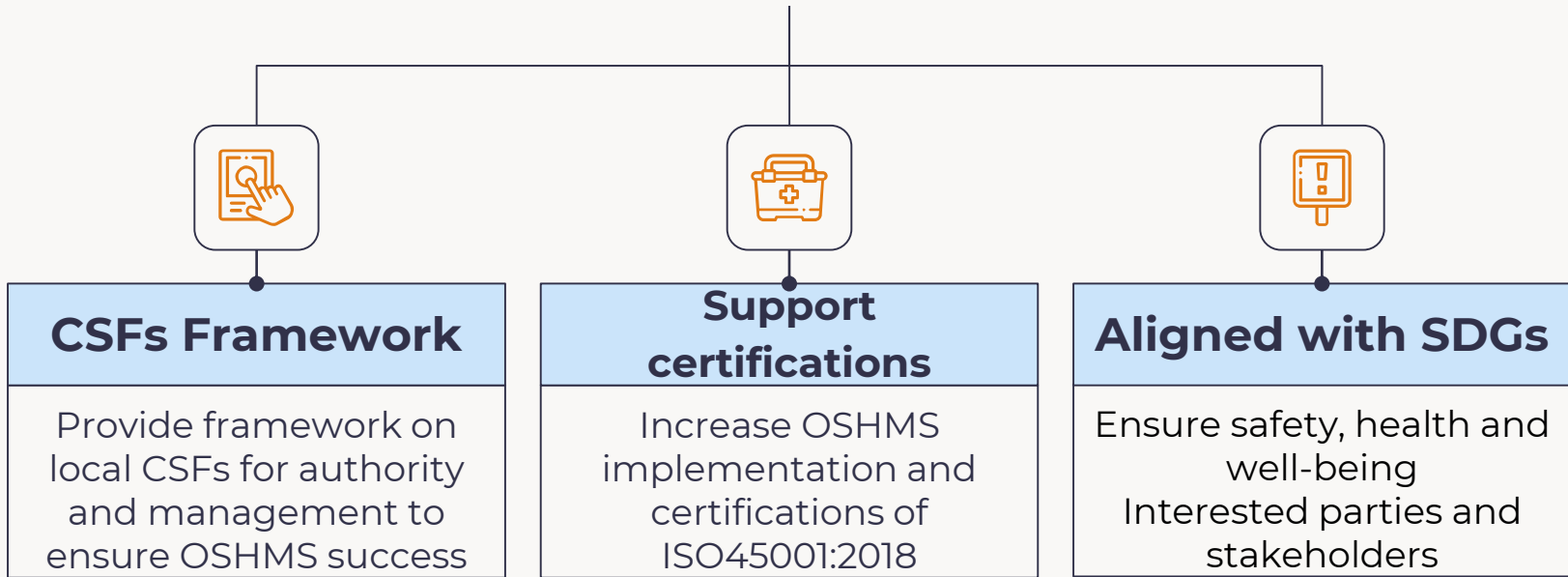


Unknown CSFs within local context; lack of studies on barriers to improve OSHMS implementation in universities where it exists



Study Justifications

Study Outcomes



Research Objective

This study aims to explore barriers and identify CSFs related to the implementation of OSHMS in certified and non-certified public universities in Malaysia.



Methodology

Study design: Qualitative study – Exploratory research with grounded theory

Study location	Local public universities; three (3) with (current or prior) OSHMS certifications & three (3) without (ISO45001, OHSAS or MS1722)
Study population	Average two key informants from each university – either from faculty or OSH Office – Management and Employee representative
Tools for data collection	Topic guide developed on barriers and CSFs
Type of analysis	Inductive analysis based on topic guide; coding via nVivo, framework matrices via excel, organised based on theory
Ethical approval	Approval from the Institutional Review Board of UPM, data collection from 2021–2022



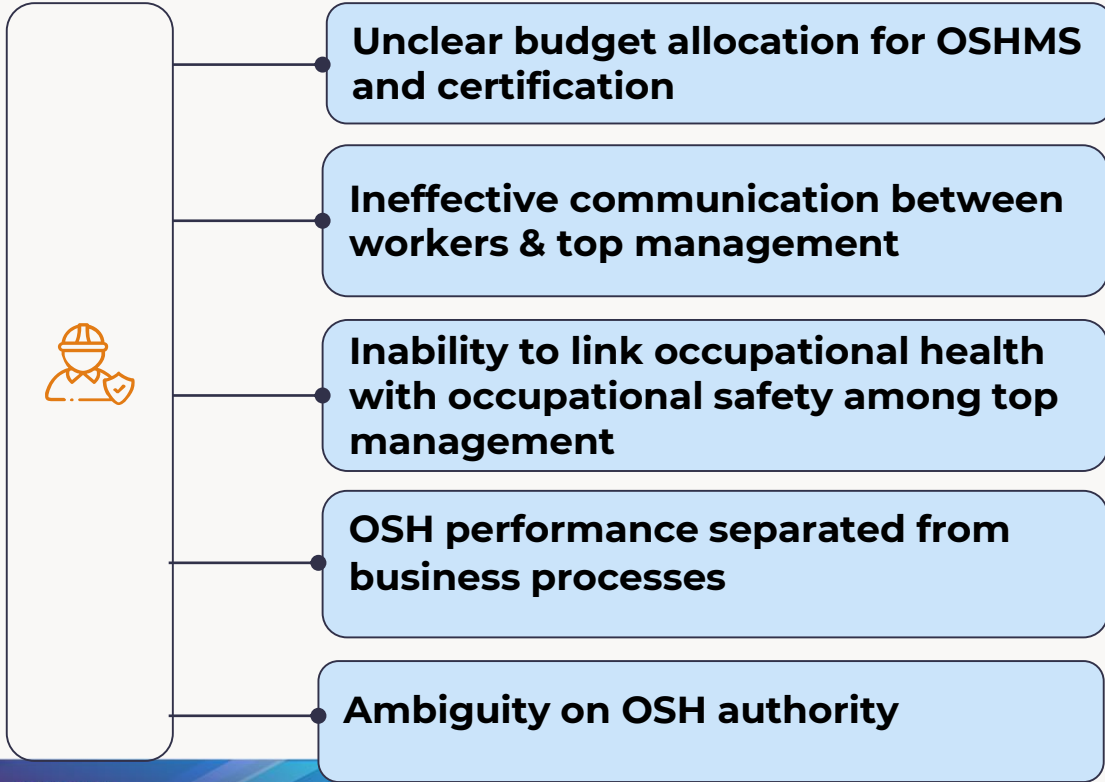
Results

Socio-Demographic characteristics of interviewees from six public universities in Malaysia

Code	Industry b/g	Rep	Roles in managing OSHMS / OSH	OSHMS/OSH training
01 UU	No	Employee	Manage OSH labs	Basic training
02 UU	No	Employee	Provide advice on workers' welfare	Educational training
03 UU	Yes	Employer	Manage OSH issues and oversee OSH implementation in the university	SHO
04 UU	No	Employee	Monitoring and evaluating OSH of the department	Educational training
05 UU	No	Employer	Supervise OSH issues related to the faculty	OHD
06 CU	Yes	Employer	Advising Top Management related to OSH in university	Confined Space Rescue, Hygiene Technician
07 CU	Yes	Employer	Steering committee for ISO45001 certifications	Lead Auditor, CHRA
08 CU	No	Employee	Responsible on safety aspect in the laboratory	CHRA
09 CU	Yes	Employer	Handle technical and enforcement at OSH centre	Lead Auditor



Barriers of OSHMS implementation



“in industry....they do have the allocations... RM10,000 per annum, for example. You just use the whole allocation for activities...Actually, it is said in theory that we need at least 20 to 25% allocation from operational costs...”

“..the top management themselves must have optimum knowledge about OSH...otherwise they won't see it. So, for them, OSH is about, I don't know... short-term injury only...”

“Because they think, they see, the output is from student production but not (necessarily) the OSH quality..”

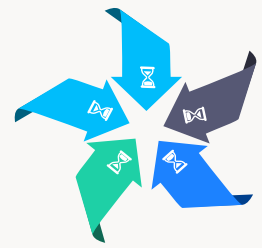


Key Critical Success Factors



Commitment and Support of Top Management	Finance and Manpower	Technology & Equipment	Streamlining OSH into business process	Directive From Authority
The most important CSF reported	Will be obtained if commitment obtained	Good equipment or infrastructure	OSH KPI cascade into departments	Directive from Ministry of Higher Education
<i>"commitment from the Vice Chancellor himself, the mandate from the VC himself"</i>	<i>"if we value [costs] against accidents..., it is actually necessary and is worth the value"</i>	<i>"...dispose of any pressure vessels that does not have a permit, then we replaced it with the new one."</i>	<i>"...we advertise...safety requirement. Err.. when the procurement comes, it already has cost analysis.."</i>	<i>"...in SETARA ranking, occupational safety and health must be something that is a star to make it a responsibility, mandatory.."</i>

Discussion



To achieve objectives of OSHMS not only depend on existence, but effort of all levels of an organisation (Goh et al. 2012)

Key barrier was linked to financial allocations – but informant from 1 certified university obtained certification with minimal costs & small team – restrict certification to smaller scope as initial step – method practiced by industries

OSH performance needs to be merged in business processes

- element in ISO45001
- Directive like *Ekosistem Kondusif Sektor Awam (EKSA)* – technique for kaizen and supports *Total Quality Management (TQM)*, if exist, will help



Discussion Cont.

Socio-Technical Theory (Rahmi & Ramadhan, 2021)

CSFs from this study is broader when compared to published evidence (Vinodkumar & Bhasi (2011), Karakavuz (2017), Aksorn & Hadikusomo (2008)).

- Commitment of senior management
- Time and resources
- Worker involvement
- Competent managers
- Safety rules and procedures



CSFs mapped according to Socio-Technical Theory (Rahmi & Ramadhan, 2021)

Internal factors			External factors
Technical subsystem	Social subsystem		
	Organisational	Personal	
Streamlining of OSH KPI into organisation activity	Management commitment	Employee involvement and participation	Directive from authority
OSH communication	Awareness of top management	OSH training	Recognition
Technology	Finance and manpower	Competent supporting team	Benchmarking from certified universities

Conclusions

- This study provides CSFs and barriers (and solutions) within local higher education context
 - Provide clear direction for authorities to support effective implementation of OSHMS in local universities
 - Scalable and can be implemented at other educational organisations – certified universities can be a benchmark
- Successful OSHMS implementation will suit OSHMP overarching aims to empowering OSH in the public sector



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