



اَوْنَبُوْ رَسِيْتِيْ بِاَتِيْكَوْ لُوْ كِيْ مَارَا
UNIVERSITI
TEKNOLOGI
MARA

UNIVERSITI TEKNOLOGI MARA

**EVALUATING CREW SATISFACTION
OF WORKING ENVIRONMENT IN KD
JEBAT WARSHIP**

**MUHAMMAD HISHAM
BIN ABDUL HALIM**

MSc

February 2022

ABSTRACT

The working environment coherently influences job satisfaction. This study focuses on the crew satisfaction of the working environment toward indoor environmental conditions aspect within the element of indoor air quality. Kapal Diraja (KD) JEBAT warship belonging to Royal Malaysian Navy has been chosen as site study consisting of 160 crew on board. This study aims to investigate the crew satisfaction towards working environment on board the KD JEBAT warship. Only crew with six months of service onboard were selected as respondents. Research methodology only uses a quantitative method by conducting a questionnaire survey toward 130 crew members (80% of the total crew population). There are three variables involved in this study, which are work-related symptoms (WRS), working compartment environment (WCE), and working performance (WPB) behaviour. The SPSS testing procedure was used to examine all of the scoring data from the questionnaire. The finding portrays most of the crew (67.1% - 71.8%) dissatisfied with the working environment. The demography factor and correlation within all variable shows the statistically significant result. This research does not question engineering practice onboard or produce new standard operating procedures or involve current asset procurement. The importance of this research is toward the social aspects of the merchant community, which may increase seafarer satisfaction.

ACKNOWLEDGEMENT

First and foremost, I would like to extend my utmost sincere appreciation to His merciful Allah for allowing me to complete this task. We are nothing more than pinnacle dust without His blessing. My heartiest thanks to my supervisor, Dr Asmat Ismail (main supervisor), Dr Suriani Ngah Abdul Wahab, and Dr Siti Rasidah binti Md Sakip (co-supervisor) for the guidance and advice. Not to mention my beloved family for full moral support to complete the thesis. I also feel grateful to all my colleagues in the Royal Malaysian Navy for helping me to finish off what I'm dealing with. Last but not least, I would like to express my utmost gratitude to family and friends who are involved in this research. Thank you all. God bless all. Amin.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
CHAPTER ONE: INTRODUCTION	1
1.1 Research Background	1
1.2 Problem Statement	2
1.3 Research Question	3
1.4 Research Aim and Objective	3
1.5 Research Hypotheses	4
1.6 Scope of Research	5
1.7 Limitation of Research	5
1.8 Significance of Study	6
1.9 Thesis Outline	6
1.10 Summary	6
CHAPTER TWO: LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Working Environment	7
2.3 Indoor Air Quality	8
2.4 Standard Regulation for Indoor Air Quality by International Organization	10
2.5 Indoor Air Pollutant Exposure	11

CHAPTER ONE

INTRODUCTION

1.1 Research Background

Work environment referred to social characteristics, physical conditions and feeling of wellbeing. These factors contribute the impact on human happiness, workplace relationships, collaboration, performance and satisfaction (Mason, 2019). Sustainability indoor environmental condition must be highlight as part of work environment element. Sustainable architecture is very important in order to produce a great outcome with consideration of all basic needs. One of the primary goals that humans have for creating a better life is sustainability (Ragheb, EL-Shimy, & Ragheb, 2015). Thus, sustainable architecture and good working environment may govern all aspects of construction, including warships. Sustainable construction is determined by creating an outcome that is environmentally and resource-efficient (Atombo, Cudjoe, Dzantor & Agbo, 2015). Recently, public concern has been raised regarding element of work environment which is indoor air quality in transportation, including air, sea, and land transportation, not to mention warships as well. Many studies show that people are exposed to pollutants that are concentrated in automobiles, buses, subways, and aircraft. have received less attention (Kamar & Hamid, 2019). Warships also play a major role, being certified as one mode of sea transport depending on the role and function.

Stays on board a ship are typically longer than those on other modes of transportation (Kim and Lee, 2015).Warship design is highly watertight and airtight to uphold military specifications and marine types. With this specification, the satisfaction of working environment is crucial to determining the ship's readiness. Crews can be subjected to formaldehyde and other volatile organic compounds emitted from finishing and decorating materials such as various kinds of panels, boards, paint, carpet, vinyl flooring tiles, fabric, and furniture (Kim and Lee, 2015). Indoor air quality on-board ship is very vital to determining crew health. Exposure to dust, fumes, fibre and volatile organic compounds (VOCs) can cause lung cancer, asthma and silicosis (DOSH,2021).