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**KAJIAN TENTANG FAKTOR-FAKTOR YANG  
MEMPENGARUHI TINGKAH LAKU SELAMAT DALAM  
KALANGAN PEKERJA KONTRAKTOR  
DI SEKTOR PEMBUATAN**

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**UUM**  
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**IJAZAH SARJANA SAINS  
(PENGURUSAN KESELAMATAN DAN KESIHATAN PEKERJAAN)  
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2017**

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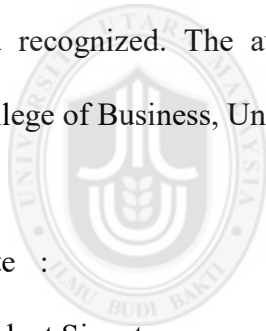
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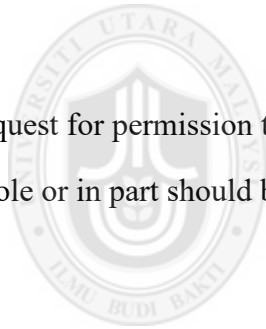


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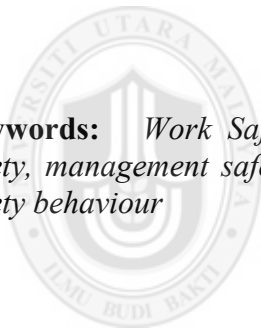
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## Abstract

Model 50-item Work Safety Scales (WSS) which developed by Hayes *et al.* (1998) was adopted to investigate the influence of the five facets of WSS on compliance with safety behaviour among contractors in manufacturing sector. The survey was done among 130 respondents (112 questionnaires were returned back) by using a questionnaire which measures the workers' perceptions on job safety, coworker safety, supervisor safety, management safety, and satisfaction with safety program towards compliance with safety behaviour. All the results were then analyzed statistically with descriptive analysis of respondents' background, reliability tests on variables' internal consistencies, correlation, and regression analysis. The findings showed that the most significant facets were the satisfaction with safety program and coworker safety in predicting the relation to comply with safety behaviour. The job safety and supervisor safety, however, indicated negative relationship to the compliance with safety behaviour. The management safety was non-significant to the compliance with safety behaviour in this study. The findings would be valuable guidance to researchers to help the organization work on the level of compliance with safety behaviour.

**Keywords:** *Work Safety Scales (WSS), job safety, coworker safety, supervisor safety, management safety, satisfaction with safety behaviour and compliance with safety behaviour*



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## Abstrak

Model 50-item *Work Safety Scales* (WSS) yang dibangunkan oleh Hayes *et al.* (1998) telah diadaptasi bagi melihat pengaruh lima elemen WSS terhadap kepatuhan terhadap tingkah laku selamat dalam kalangan pekerja kontraktor di sektor pembuatan. Kajian dilakukan ke atas 130 responden dengan menggunakan borang soal selidik (112 borang dipulangkan) untuk mengukur persepsi pekerja kontraktor bagi keselamatan pekerjaan, keselamatan rakan sekerja, penyeliaan keselamatan, pengurusan keselamatan dan kepuasan terhadap program keselamatan terhadap kepatuhan terhadap tingkah laku selamat. Semua keputusan akan di analisa secara statistik bagi deskriptif demografik responden, ujian kebolehpercayaan, ujian korelasi dan ujian regresi. Penemuan kajian menunjukkan elemen WSS yang paling signifikan adalah kepuasan terhadap program keselamatan dan keselamatan rakan sekerja, dengan keselamatan pekerjaan dan penyeliaan keselamatan mempunyai hubungan negatif terhadap kepatuhan terhadap tingkah laku selamat. Walau bagaimanapun, pengurusan keselamatan adalah tidak signifikan dalam kajian ini. Penemuan kajian ini akan menjadi panduan bernilai kepada para penyelidik bagi membantu organisasi dalam kepatuhan terhadap tingkah laku selamat.

**Kata kunci:** *Work Safety Scales (WSS), keselamatan pekerjaan, keselamatan rakan sekerja, penyeliaan keselamatan, pengurusan keselamatan, kepuasan terhadap program keselamatan dan kepatuhan terhadap tingkah laku selamat.*



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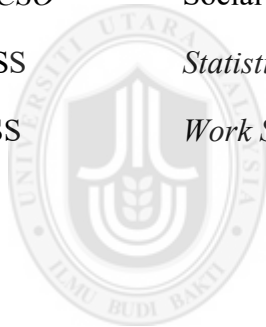


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## SENARAI SINGKATAN

### Singkatan

AKKP	Akta Keselamatan dan Kesihatan Pekerjaan
CDC	Centre for Disease Control and Prevention
CSI	<i>Cement Sustainability Initiative</i>
DOSH	Department of Occupational Safety and Health
DV	Dependent Variable
IV	Independent Variable
OHSAS	<i>Occupational Health and Safety Assessment Series</i>
OSHMS	<i>Occupational Safety and Health Management System</i>
SOCSSO	Social Security Organization
SPSS	<i>Statistical Package for the Social Sciences</i>
WSS	<i>Work Safety Scales</i>



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# BAB 1

## PENGENALAN

### 1.0 Pengenalan

Kajian ini dijalankan bagi meneliti pengaruh persepsi keselamatan terhadap kepatuhan kepada tingkah laku selamat dalam kalangan pekerja kontraktor di sebuah kilang sektor pembuatan dengan menggunakan Model 50-item *Work Safety Scale (WSS)* yang diperkenalkan oleh Hayes *et al.* (1998) dari lima elemen pengukuran iaitu: Keselamatan Pekerja, Keselamatan Rakan Sekerja, Penyeliaan Keselamatan, Pengurusan Keselamatan dan Kepuasan Terhadap Program Keselamatan.

Menurut statistik dari Jabatan Buruh Amerika, purata kadar kematian bagi pekerja kontraktor adalah lebih tinggi berbanding semua pekerja industri iaitu pada kadar 13.3 per 100,000 berbanding 4.0 per 100,000 pekerja biasa dari tahun 2003-2007 (CDC, 2011). Kemalangan bagi pekerja kontraktor juga dilihat semakin meningkat dalam jangka masa 10 tahun di Hong Kong iaitu dari 17.9% pada tahun 1998 kepada 50.1% pada tahun 2007 (Hon *et al.*, 2010).

Banyak syarikat akan mengupah kontraktor bagi melaksanakan kerja-kerja penyelenggaraan atas pelbagai faktor seperti penjimatan kos buruh, mengurangkan liabiliti, penetapan kadar bayaran yang fleksibel dan mudah dalam urusan pemecatan.



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## RUJUKAN

- Abdul Rahim Abdul Hamid, Muhd Zaimi Abd Majid, Bachan Singh (2008). Causes of Accidents at Construction Sites. *Malaysian Journal of Civil Engineering* 20(2): 242-259
- Adli Mohd Shariff (2012). The application of workplace safety scale among employees of a utility company. Master of Science, Universiti Utara Malaysia.
- AKKP 1994 (2006). "Garis Panduan bagi Akta Keselamatan dan Kesihatan Pekerjaan 1994 (Akta 514)," Jabatan Keselamatan dan Kesihatan Pekerjaan, Kementerian Sumber Manusia.
- Barling, J., Loughlin, C., & Kelloway, E. K. (2002). Development and test of a model linking safety-specific transformational leadership and occupational safety. *Journal of Applied Psychology*, 15, 1173-1182.
- Bass, B. M. (1985). *Leadership and Performance Beyond Expectation*. New York.: Harper & Row.
- Bowander, B. (1987). The Bhopal accident. *Technological Forecasting and Social Change*, 32 (2), 169–182.
- Brown, R.L. and Holmes, H. (1986). "The use of a factor-analytic procedure for assessing the validity of an employee safety climate model", *Accident Analysis and Prevention*, Vol. 18, pp. 445-70.
- Bureau of Labour Statistics, U.S. Department of Labour (2010). *Occupational Outlook Handbook*, 2010-11 Edition, Maintenance and Repair Workers, General, available at: [www.bls.gov/oco/ocos194.htm](http://www.bls.gov/oco/ocos194.htm)

- Burke, M. J., Sarpy, S. A., Smith-Crowe, K., Chan-Serafin, S., Salvador, R. O., & Islam, G. (2006). Relative Effectiveness of Worker Safety and Health Training Methods. *American Journal of Public Health*, 96 (2), 315-324.
- Burton, J. (2010). *WHO Healthy Workplace Framework: Background and Supporting Literature and Practices*. New York. World Health Organisation.
- Centres for Disease Control and Prevention, CDC (2011). Fatal Injuries Among Grounds Maintenance Workers - United States, 2003-2008. *Morbidity and Mortality Weekly Report*. May 6, 2011 / 60(17); 542- 546
- Chan, A.P.C., Wong, F.K.W., Yam, M.C.H., Chan, D.W.M., Ng, J.W.S. and Tam, C.M. (2005). From Attitude to Culture – Effect of Safety Climate on Construction Safety, Research Monograph, Construction Safety Research Group, Research Centre for Construction and Real Estate Economics, Department of Building and Real Estate, The Hong Kong Polytechnic University.
- Cheyne, A., Cox, S., Oliver, A. and Tomas, J.M. (1998). “Modelling safety climate in the prediction of levels of safety activity”, *Work & Stress*, Vol. 12, pp. 255-71.
- Choudhry, R.M., Fang, D. and Lingard, H. (2009). “Measuring safety climate of a construction company”, *Journal of Construction Engineering and Management*, Vol. 135 No. 9, pp. 890-899.
- Chouhan, T.R. (2005). The unfolding of Bhopal disaster. *Journal of Loss Prevention in the Process Industries*, 18(4-6), 205-208.
- Chua, Y.P. (2006). *Asas statistik penyelidikan*. Kuala Lumpur: McGraw Hill Education.

- Clarke, S. (2006). The Relationship between Safety Climate and Safety Performance: A Meta-Analytic Review. . *Journal of Occupational Health Psychology*, 11(4), 315-327.
- Clarke, S. and Cooper, C.L. (2004). *Managing the Risk of Workplace Stress: Health & Safety Hazards*, Routledge, London.
- Cooper, M.D, Phillips, R.A. (1994). Validation of a safety Climate measure. *The British Psychological Society, Annual Occupational Psychology Conference: 3-5 Jan*, Birmingham.
- Cooper, M. D., & Phillips, R. A. (2004). Exploratory analysis of the safety climate and safety behaviour relationship. *Journal of Safety Research* 35(5), 497-512.
- CSI Driving and Contractor Safety Initiative, Cement Sustainability Initiative. Retrieved from <http://www.wbcdcement.org/index.php>).
- DeJoy, D.M (2005). Behavior change versus culture change: Divergent approaches to managing workplace safety. *Safety Science* 43 (2005) 105-129.H
- Dekker S. (2006). *The Field Guide to Understanding Human Error*. Aldershot, UK: Ashgate.
- Dessler, G. (2000). *Human resource management* (8<sup>th</sup> ed.). New Jersey: Prentice Hall.
- DOSH, Occupational & Safety Health, *Guideline on Contract Management* (2015).
- DOSH, Occupational & Safety Health, (2011). *Guidelines on Occupational Safety and Health Management Systems*.
- Fleming M & Lardner R. (2002). *Strategies to promote safe behavior as part of a health and safety management system*. Contact Research Report, 430-38.
- Flin, R., Mearns, K., O'Connor, P., & Bryden, R. (2000). *Safety Science*, 34, 177-192.

- Geller E.S. *Creating a Total Safety Traffic Culture*. Chris S. Dula. East Tennessee State University. Virginia Tech, © 2007 AAA Foundation for Traffic Safety
- Geller, E.S., Roberts, D.S., & Gilmore, M.R. (1996). Predicting propensity to actively care for occupational safety. *Journal of Safet Research*, 27 (I), 1-8.
- Gillen, M., Baltz, D., Gassel, M., Kirsch, L. and Vaccaro, D. (2002). “Perceived safety climate, job demands, and coworker support among union and non-union injured construction workers”, *Journal of Safety Research*, Vol. 33, pp. 33-51.
- Guastello, S. J. (1991). Psychosocial variables related to transit safety: The application of catastrophe theory. *Work & Stress*, 5(1), 17-28.
- Guastello, S.J., & Guastello, D.D. (1988). *The Occupational Hazards Survey: Second edition manual and case report*. Milwaukee, WI: Guastello & Guastello.
- Gyekye, A. S. (2005). Workers perceptions of workplace safety and job satisfaction. *Journal of Occupational Safety and Ergonomics*, 11, 291-302.
- Gyekye, A. S., & Salminen, S. (2007). Workplace safety perceptions and perceived organizational support: Do supportive perceptions influence safety perception? *International Journal of Occupational Safety and Ergonomics*, 13(2), 189-200
- Hale, A.R. and Hovden, J. (1998). “Management and culture: the third age of safety. A review of approaches to organizational aspects of safety, health, and environment”, in Feyer, A.M. and Williamson, A. (Eds), *Occupational Injury: Risk, Prevention and Intervention*, Taylor & Francis, London, pp. 129-165.
- Hassan Ali, Nor Azimah Chew Abdullah, Chandrakantan Subramaniam (2009). "Management practice in safety culture and its influence on workplace injury:

An industrial study in Malaysia", *Disaster Prevention and Management*, 18(5): 470 – 477

Harper, A.C., Cordery, J.L., de Klerk, N.H., Sevastos, P., Geelhoed, E., Gunson, C., Robinson, L., Sutherland, M., Osborn, D. and Colquhoun, J. (1997). "Curtin industrial safety trial: managerial behaviour and program effectiveness", *Safety Science*, Vol. 24, pp. 173-9.

Harrell, W. A. (1990). Perceived risk of occupational injury: Control over pace of work and blue-collar versus white-collar work. *Perceptual and Motor Skills*, 70, 1351-1359

Hayes, B.E, Perander, J, Smecko, T, and Trask, J (1998). Measuring Perceptions of Workplace Safety: Development and Validation of the Work Safety Scale. *Journal of Safety Research*, Vol. 29, No., 3, pp. 145–161

Hemingway, M. and Smith, C.S. (1999). "Organisational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses", *Journal of Occupational & Organizational Psychology*, Vol. 72, pp. 285-99.

Hofmann, D.A. and Morgeson, F.P. (1999). "Safety-related behaviour as a social exchange: the role of perceived organisational support and leader-member exchange", *Journal of Applied Psychology*, Vol. 84, pp. 286-96.

Hofmann, D.A., & Stetzer, A. (1996). A cross-level investigation of factors influencing unsafe behaviours and accidents. *Personnel Psychology*, 49 (2), 307-339.

Hon C.K., Albert P.C. Chan, Francis K.W. Wong (2010). An analysis for the causes of accidents of repair, maintenance, alteration and addition works in Hong Kong. *Safety Science* 48 (2010) 894–901.

- Hon, C.K., Chan, A.P.C. and Chan, D.W.M. (2011). "Strategies for improving safety performance of repair, maintenance, minor alteration and addition (RMAA) works", *Facilities*, Vol. 29 Nos 13/14, pp. 591-610.
- Hon C.K., Hon Albert, P.C. Chan, Daniel W.M. Chan (2011). "Strategies for improving safety performance of repair, maintenance, minor alteration and addition (RMAA) works", *Facilities*, Vol. 29 Iss 13/14 pp. 591 – 610
- HSC, Advisory Committee on the Safety of Nuclear Installations (1993). *Organising for Safety*. London: HSE Books.
- HSE (2001). Levels and Trends in Workplace Injury: Reported Injuries and the Labour Force Survey 1997/1998 [online] Available <http://www.hse.gov.uk/laborsurvey>
- Ivancevich, M. J. (1995). *Human resource management*. USA: Richard D. Irwin Inc.
- Jane Mullen (2004). Investigating factors that influence individual individual safety behaviour at work. *Journal of Safety Research* 35. 275–285.
- Johnson, S. E. (2007). The predictive validity of safety climate. *Journal of Safety Research*, 38(5), 511 - 521.
- Kelloway, E. K., & Francis, L. (2008). *Management of Occupational Health and Safety*. 4<sup>th</sup> Edition. Ontario: Nelson Education Ltd.
- Kelloway, E. K., Mullen, J., & Francis, L. (2006). Divergent Effects of Transformational and Passive Leadership on Employee Safety. *Journal of Occupational Health Psychology*, 11(1), 76-86.
- Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Lavie, P., Kremerman, S., & Wiel, M. (1982). Sleep disorders and safety in industrial

- workers. *Accident Analysis and Prevention*, 14, 311–314.
- Lee, T.R., MacDonald, S.M. and Coote, J.A. (1993). “Perceptions of risk and attitudes to safety at a nuclear reprocessing plant”, paper presented at the SRA Fourth Conference, Rome, October.
- Maithily a/p Karuppiah (2011). Investigating the influence of work safety scale (WSS) on safety behaviour: A study among employees of a utility company. Master of Science, Universiti Utara Malaysia.
- Makin, P.J. and Sutherland, V.J. (1994). Reducing Accidents Using a Behavioural Approach. *Leadership & Organization Development Journal*. 15: 5-10
- Mearns, K., Whitaker, S. M., & Flin, R. (2003). Safety climate, safety management practice and safety performance in offshore environments. *Safety Science*, 41, 641-680
- Minetos, P. (1989). ‘*Supervisors: Teach Them Well,*’ *Safety & Health*, October 1989, Vol. 140, No. 4, p. 64.
- Mohd Nizam Ab Rahman, Nor Kamaliana Khamis, Rosmaizura Mohd Zin, Baba Md Deros, Wan Hasrulnizam Wan Mahmood (2010). “Implementation of 5S Practices in Manufacturing Companies-A Case Study”, *American Journal of Applied Sciences* T(8): 1182-1189.
- Mohamed, S. (2002). “Safety climate in construction site environments”, *Journal of Construction Engineering and Management*, Vol. 128 No. 5, pp. 375-384.
- Moorthy Pakisamy (2012). Examining The Impact Of Work Safety Scale (Wss) Among The Employees Of A Ship Building And Repair Company On Their Compliance With Safety Behaviour. Master of Science, Universiti Utara Malaysia.



- Murphy, L. R., Sturdivant, K., & Gershon, R. M. (1993). *Organizational and Employee Characteristics Predict Compliance with Universal Precautions*. Paper presented at the Paper presented at the annual meeting of the American Psychological Society.
- Murray, M., Fitzpatrick, D., & O'Connell, C. (1997). Fishermen's blue: factors related to accidents and safety among Newfoundland fishermen. *Work Stress, 11*, 292–7.
- Mustazar Mansur & Ho Shu Peng (2009). Keberkesanan Latihan Keselamatan dan Kesihatan Dalam Mengurangkan Kemalangan Di Tempat Kerja (Effectiveness Of Occupational Safety And Health Training In Reducing Accidents At Work Place). PROSIDING PERKEM IV, JILID 2. 293-324 ISSN: 2231-962X
- N. Gregory Mankiw (4th Edition 2007). *Principles of Economics*. Mason, Ohio: Thomson/South-Western. [ISBN 0-32-422472-9](https://doi.org/10.1111/j.978-0-32-422472-9).
- Neal, A., Griffin, M.A. and Hart, P.M. (2000). “The impact of organizational climate on safety climate and individual behaviour”, *Safety Science*, Vol. 34, pp. 99-109.
- Nor Azimah Chew Abdullah & Ab Aziz Yusof (2013). *Mengurus Keselamatan dan Kesihatan Pekerjaan. Konsep, Isu dan Cabaran*. Pearson Malaysia Sdn. Bhd. K.Lumpur
- Nunally, J. C. (1978). *Psychometric Theory*. 2<sup>nd</sup> Edition. New York: McGraw-Hill.
- O'Dea, A., & Flin, R. (2001). Site managers and safety leadership in the offshore oil and gas industry. *Safety Science, 37*, 39-57.
- OSHAS 18001 (2007). *Occupational Health and Safety Management Systems – Guidelines for the Implementation of OSHAS 18001:2007*. London: British Standard Institute.

- Parker, S.K., Axtell, C.M. and Turner, N. (2001). "Designing a safer workplace: importance of job autonomy, communication quality and supportive supervisors", *Journal of Occupational Health Psychology*, Vol. 6, pp. 211-8.
- Paweł Bożyk (2006). "Newly Industrialised Countries". *Globalisation and the Transformation of Foreign Economic Policy*. Ashgate Publishing, Ltd. p. 164. [ISBN 0-75-464638-6](https://doi.org/10.1080/0754646386).
- Roberts, D. S., & Geller, E. S. (1995). An "actively caring" model for occupational safety: a field test. *Applied and Preventative Psychology* 4(53–59).
- Salminen, S., & Saari, J. (1995). Measures to improve safety and productivity simultaneously. *International Journal of Industrial Ergonomics*, 15, 261-269.
- SBA – U.S Small Business Administration. Retrieved from <https://www.sba.gov/starting-business/hire-retain-employees/hire-contractor-or-employee>
- Sekaran, U. (1992). *Research methods for business: A skill-building approach. Second Edition*. John Wiley & Son Inc.
- Seo DC, Torabi MR, Blair EH, Ellis NT (2004). A cross-validation of safety climate scale using confirmatory factor analytic approach. *Jurnal of Safety Research*. 35(4): 427-445.
- Sinclair, R., Smith, R., Colligan, M., Prince, M., Nguyen, T., & Stayner, L. (2003). Evaluation of a Safety Training Programme in Three Food Service Companies. *Journal of Safety Research* , 34, 547-558.

- Siu, O. L., Phillips, D. R., & Leung, T. W. (2004). Safety climate and safety performance among construction workers in Hong Kong: the role of psychological strains as mediators. *Accident Analysis Prevention*, 36, 359-366
- Siti Nasyrah Ibrahim, Siti Nurani Hassan, Syed Abdul Hamid bin Syed Hassan, Mohammad Noorizzuddin Nooh, Norsyahidah Mohammad Yusof (2015). The Awareness Level of Behaviour Based Safety (BBS) In Construction Industry. *International Journal of Engineering Research and Reviews* ISSN 2348-697X (Online) Vol. 3, Issue 1, pp: (26-33), Month: January - March 2015, Available at: [www.researchpublish.com](http://www.researchpublish.com)
- Smith, C. S., Kruger, T., Silverman, G., Haff, M., Hayes, B. E., Silverma, M., & Mattimore, L. (1992). A research method for assessing industrial accidents. *Paper presented at the annual convention of the Human Factors Society.*
- SOSCO (2015). Laporan Tahunan 2010-2014. Muat turun dari laman sesawang SOCSO <https://www.perkeso.gov.my/en/report/annual-reports.html>
- Steven Hecker and Linda M. Goldenhar (2013). Understanding Safety Culture and Safety Climate in Construction: Existing Evidence and a Path Forward, Safety Culture/Climate Workshop June 11-12, 2013 Washington, DC
- Sui-Pheng, L. and S.D. Khoo (2001). "Team performance management: Enhancement through Japanese 5-S principles. *Team Perform. Manage*", 17: 105-111. DOI: 10.1108/13527590110411000,
- Tan-Wilhelm, D., Witte, K., Liu, W.Y., Newman, L.S., Janssen, A., Ellison, C., Yancey, A., Sanderson, W. and Henneberger, P.K. (2000). "Impact of a worker

- notification program: assessment of attitudinal and behavioural outcomes”,  
American Journal of Industrial Medicine, Vol. 37, pp. 205-13.
- Therkelsen, D. J., & Fiebich, C. L. (2003). The supervisor: The linchpin of employee relations. *Journal of Communication Management*, 8(2), 120-129.
- Tomas, J.M., Melia, J.L. and Oliver, A. (1999). “A cross-validation of a structural equation model of accidents: organizational and psychological variables as predictors of work safety”, *Work & Stress*, Vol. 13, pp. 49-58.
- Tuncel, S., Lotlikar, H., Salem, S., & Daraiseh, N. (2006). Effectiveness of behaviour based safety interventions to reduce accidents and injuries in workplaces: Critical appraisal and meta-analysis. *Theoretical Issues in Ergonomics Science* 7, 191-209.
- Vinodkumar, M. N., & Bhasi, M. (2010). Safety management and safety behaviour: Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*, 42, 2082-2093.
- WiseGEEK – Clear answers for common questions. Retrieved from <http://www.wisegeek.net/what-is-a-maintenance-contractor.htm>
- Yakubu D.M and Bakr I.M. (2015). Construction Workers Perception and Understanding Of OSH Management System On Site. *Journal of Science (JOS)* ISSN 2324-9854 380 Vol. 4, No. 3, Pages: 380-385
- Yusof Omar (2017). *Hazad, Risiko, Insiden. Keselamatan Dan Kesihatan Pekerjaan. Senang Terbit* PLT (LLP 0006390 LGN).
- Zineerah Binti Ahmad Zamil (2012). Assessing the Influence of Work Safety Scale on Safety Behaviour among Pathology Laboratory Employees. Master of Science,

Universiti Utara Malaysia.

Zikmund, W. G. (2003). *Business Research Method* 3<sup>rd</sup> Edition. South Western: Ohio.

Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology*, 65(1), 96–101.

Zohar, D. (2000). A group-level model of safety climate: testing the effects of group climate on microaccidents in manufacturing jobs. *Journal of Applied Psychology*, 85, 587–596.

Zohar, D. (2002). “The effects of leadership dimensions, safety climate, and assigned priorities on minor injuries in work groups”, *Journal of Organizational Behavior*, Vol. 23, pp. 75-92.



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**Work Safety Scale (WSS)**  
**(Kajiselidik Skala Keselamatan Kerja)**

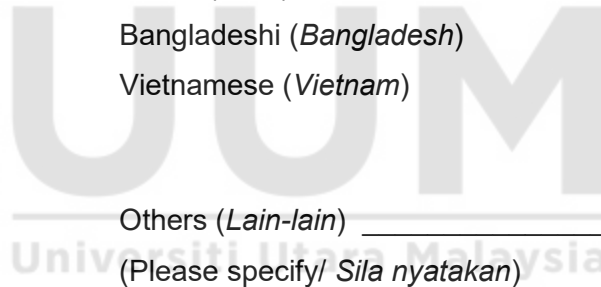
**SECTION I: ABOUT YOURSELF**

Job Title (*Jawatan*) : \_\_\_\_\_

Department (*Jabatan*) : \_\_\_\_\_

Gender (*Jantina*) : Male (*Lelaki*)   
 Female (*Perempuan*)

Race (*Bangsa*) : Malay (*Melayu*)   
 Chinese (*Cina*)   
 Indian (*India*)   
 Bangladeshi (*Bangladesh*)   
 Vietnamese (*Vietnam*)



Others (*Lain-lain*) \_\_\_\_\_  
 (Please specify/ *Sila nyatakan*)

Education Level (*Taraf Pendidikan*) : SPM  STPM   
 Competent Cert  Diploma   
 Degree  Masters   
 PhD  Others

Age (*Umur*) : 20 – 29 years  30 – 39 years   
 40 – 49 years  Above 50 years

Working Experience (*Pengalaman Kerja*) : 1 – 5 years  6 – 10 years   
 11 – 15 years  16 – 20 years   
 Above 21 years

## SECTION II: WORKPLACE SAFETY SCALE

Think about your current job. Using the scale below, please answer the following questions. **(Fikirkan tentang pekerjaan semasa anda. Dengan menggunakan skala di bawah, sila jawab soalan-soalan berikut).**

Strongly Disagree/ <b>Sangat Tidak Setuju</b>	Disagree/ <b>Tidak Setuju</b>	Neither Agree Nor Disagree/ <b>Berkecuali</b>	Agree/ <b>Setuju</b>	Strongly Agree/ <b>Sangat Setuju</b>
1	2	3	4	5

### 1. Job Safety / Keselamatan Pekerja

Think about your job. Do you agree or disagree that each of the following words or phrases describes your job? Circle one answer for each statement using the scale at the top of the page. **( Fiki tentang pekerjaan anda. Adakah anda bersetuju atau tidak bersetuju terhadap kenyataan-kenyataan berikut berkenaan dengan kerja anda? Bulatkan setiap jawapan berpandukan skala yang dinyatakan di atas).**

1	Dangerous ( <b>Bahaya</b> )	1	2	3	4	5	6	Could Get Hurt Easily <b>(Senang mendapat kecederaan)</b>	1	2	3	4	5
2	Safe ( <b>Selamat</b> )	1	2	3	4	5	7	Unsafe ( <b>Tidak selamat</b> )	1	2	3	4	5
3	Hazardous ( <b>Berhazard</b> )	1	2	3	4	5	8	Fear for Health <b>(Memudaratkan kesihatan)</b>	1	2	3	4	5
4	Risky ( <b>Berisiko</b> )	1	2	3	4	5	9	Chance of Death <b>(Berpeluang menyebabkan kematian)</b>	1	2	3	4	5
5	Unhealthy ( <b>Tidak Sihat</b> )	1	2	3	4	5	10	Scary ( <b>Menakutkan</b> )	1	2	3	4	5

### 2. Coworker Safety/ Keselamatan Rakan Sekerja

Think about the people you work with. Do you agree or disagree that each of the following words or phrases describes these people? Circle one answer for each statement using the scale at the top of the page. **(Fikirkan tentang orang yang bekerja dengan anda. Adakah anda bersetuju atau tidak bersetuju terhadap kenyataan-kenyataan berikut berkenaan dengan sikap mereka? Bulatkan setiap jawapan berpandukan skala yang dinyatakan di atas).**

1	Ignore safety rules <b>(Mengabaikan peraturan-peraturan keselamatan)</b>	1	2	3	4	5	6	Encourage others to be safe <b>(Menggalkan orang lain bekerja dengan selamat)</b>	1	2	3	4	5
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2	Don't care about others safety ( <b>Tidak pedulikan keselamatan orang lain</b> )	1 2 3 4 5	7	Take chances with safety ( <b>Menggadaikan keselamatan sendiri</b> )	1 2 3 4 5
3	Pay attention to safety rules ( <b>Memberi perhatian terhadap peraturan keselamatan</b> )	1 2 3 4 5	8	Keep work area clean ( <b>Memastikan tempat kerja bersih</b> )	1 2 3 4 5
4	Follow safety rules ( <b>Mematuhi peraturan-peraturan keselamatan</b> )	1 2 3 4 5	9	Safety-oriented ( <b>Berorientasikan keselamatan</b> )	1 2 3 4 5
5	Look out for others' safety ( <b>Mengambil berat terhadap keselamatan orang lain</b> )	1 2 3 4 5	10	Don't pay attention ( <b>Tidak menumpukan perhatian</b> )	1 2 3 4 5

### 3. Supervisor Safety/ Keselamatan Penyelia

Think about the people you work with. Do you agree or disagree that each of the following words or phrases describes these people? Circle one answer for each statement using the scale at the top of the page. (**Fikirkan tentang orang yang bekerja dengan anda. Adakah anda bersetuju atau tidak bersetuju terhadap kenyataan-kenyataan berikut berkenaan dengan sikap mereka? Bulatkan setiap jawapan berpandukan skala yang dinyatakan di atas.**)

1	Praises safe work behaviours ( <b>Menghargai perilaku selamat</b> )	1 2 3 4 5	6	Discusses safety issues with others ( <b>Membincangkan isu-isu keselamatan dengan rakan sekerja yang lain</b> )	1 2 3 4 5
2	Encourages safe behaviours ( <b>Menggalakkan perilaku selamat</b> )	1 2 3 4 5	7	Updates safety rules ( <b>Mengemaskini keselamatan</b> )	1 2 3 4 5
3	Keep workers inform of safety rules ( <b>Sentiasa memaklumkan peraturan keselamatan kepada pekerja</b> )	1 2 3 4 5	8	Trains workers to be safe ( <b>Melatih pekerja supaya bekerja dengan selamat</b> )	1 2 3 4 5



4	Rewards safe behaviours <b>(Memberi ganjaran terhadap perilaku selamat)</b>	1 2 3 4 5	9	Enforces safety rules <b>(Menguatkuasakan peraturan keselamatan)</b>	1 2 3 4 5
5	Involves workers in setting safety goals <b>(Melibatkan pekerja dalam menetapkan matlamat keselamatan)</b>	1 2 3 4 5	10	Acts on safety suggestions <b>(Bertindak t'hadap cadangan keselamatan)</b>	1 2 3 4 5

#### 4. Management Safety/ Keselamatan oleh Pengurusan

Think about your management. Do you agree or disagree that each of the following words or phrases describes your management? Circle one answer for each statement using the scale at the top of the page. **(Fikirkan tentang pihak pengurusan anda. Adakah anda bersetuju atau tidak bersetuju terhadap kenyataan-kenyataan berikut berkenaan dengan mereka? Bulatkan setiap jawapan berpandukan skala yang dinyatakan di atas).**

1	Provide enough safety programs <b>(Menyediakan program keselamatan yang mencukupi)</b>	1 2 3 4 5	6	Provide safe working conditions <b>(Menyediakan tempat kerja yang selamat)</b>	1 2 3 4 5
2	Conduct frequent safety inspection <b>(Menjalankan pemeriksaan keselamatan secara kerap)</b>	1 2 3 4 5	7	Response quickly to safety concerns <b>(Bertindak segera terhadap isu-isu keselamatan)</b>	1 2 3 4 5
3	Investigates safety problems quickly <b>(Menyiasat masalah keselamatan dengan segera)</b>	1 2 3 4 5	8	Helps maintain clean work area <b>(Membantu mengekalkan tempat kerja yang bersih)</b>	1 2 3 4 5
4	Rewards safe workers <b>(Memberi ganjaran terhadap pekerja-pekerja yang bekerja dengan selamat)</b>	1 2 3 4 5	9	Provides safety information <b>(Menyediakan maklumat-maklumat keselamatan)</b>	1 2 3 4 5

5	Provides safe equipment <b>(Menyediakan peralatan-peralatan kerja yang selamat)</b>	1	2	3	4	5	10	Keeps workers informed of hazards <b>(Sentiasa memaklumkan kepada pekerja berkenaan berkenaan keadaan-keadaan yang merbahaya)</b>	1	2	3	4	5
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### 5. Safety Programme (Policies)/ Program dan Polisi Keselamatan

Think about your safety programs at work. Do you agree or disagree that each of the following words or phrases describes this safety program? Circle one answer for each statement using the scale at the top of the page. **(Fikirkan tentang pelaksanaan program keselamatan di tempat kerja anda. Adakah anda bersetuju atau tidak samada setiap ungkapan di bawah adalah pernyataan berkaitan dengan program tersebut? Bulatkan setiap jawapan berpandukan skala yang dinyatakan di atas).**

1	Worthwhile <b>(Bermanfaat)</b>	1	2	3	4	5	6	Unclear <b>(Tidak jelas)</b>	1	2	3	4	5
2	Helps prevent accident <b>(Membantu mencegah kemalangan)</b>	1	2	3	4	5	7	Important <b>(Penting)</b>	1	2	3	4	5
3	Useful <b>(Berfaedah)</b>	1	2	3	4	5	8	Effective in reducing injuries <b>(Efektif mengurangkan kecederaan)</b>	1	2	3	4	5
4	Good <b>(Bagus)</b>	1	2	3	4	5	9	Doesn't apply to my workplace <b>(Tidak sesuai diaplikasikan di tempat kerja saya)</b>	1	2	3	4	5
5	First-rate <b>(Sangat bernilai)</b>	1	2	3	4	5	10	The safety program/policy is not effective <b>(Program/ polisi keselamatan tidak berkesan)</b>	1	2	3	4	5

## 6. Compliance with Safety Behaviours/*Kepatuhan terhadap Perilaku Kerja Selamat*

Think about your current job. Using the scale below, please answer the following questions on the following pages. *(Fikirkan tentang pekerjaan terkini anda. Dengan berpandukan skala di bawah, sila jawab soalan-soalan yang telah disenaraikan).*

Never/ <i>Tidak Pernah</i>	Seldom/ <i>Jarang</i>	Sometimes/ <i>Kadangkala</i>	Often/ <i>Kerap kali</i>	Always/ <i>Selalu</i>
1	2	3	4	5

1	Overlook safety procedures in order to get my job done more quickly <i>(Mengabaikan prosedur keselamatan semata-mata ingin memastikan kerja dapat disiapkan dengan segera)</i>	1	2	3	4	5
2	Follow all safety procedures regardless of the situation I am in <i>(Mematuhi segala prosedur keselamatan tanpa mengambil kira situasi saya bekerja)</i>	1	2	3	4	5
3	Handle all situations as if there is a possibility of having an accident <i>(Mengendalikan semua situasi dengan beranggapan terdapat kebarangkalian kemalangan boleh berlaku)</i>	1	2	3	4	5
4	Wear safety equipment required by practice <i>(Menggunakan peralatan-peralatan keselamatan yang telah ditetapkan)</i>	1	2	3	4	5
5	Keep my work area clean <i>(Memastikan tempat kerja saya bersih)</i>	1	2	3	4	5
6	Encourage co-workers to be safe <i>(Menggalakkan rakan sekerja untuk bekerja dengan selamat)</i>	1	2	3	4	5
7	Keep my work equipment in safe working condition <i>(Memastikan peralatan-peralatan kerja saya berada dalam keadaan selamat)</i>	1	2	3	4	5
8	Take shortcuts to safe working behaviours in order to get the job done faster <i>(Mengambil jalan pintas terhadap perilaku kerja selamat supaya kerja dapat disiapkan dengan segera)</i>	1	2	3	4	5
9	Do not follow safety rules that I think are unnecessary <i>(Tidak mematuhi peraturan-peraturan keselamatan yang dianggap tidak penting)</i>	1	2	3	4	5
10	Report safety problems to my supervisor when I see safety problems <i>(Melapor kepada penyelia apabila mengenalpasti/mendapati terdapat masalah-masalah keselamatan)</i>	1	2	3	4	5
11	Correct safety problems to ensure accidents will not occur <i>(Memperbetulkan masalah-masalah keselamatan bagi memastikan kemalangan tidak berlaku)</i>	1	2	3	4	5