

Title: The Important Of Total Quality Management And Sustainability Herbs Industry Business In Malaysia

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ABSTRACT

This paper discusses the importance of quality management in confirming the success of every herbs industry business in Malaysia. The research paper to be focused issues on identifying and removing the causes of errors in the production line. The reason of choosing this topic because to ensure the product can be marketed success throughout Malaysia and global. There will be lot of activities; systems, procedure and regulation need to be fulfilled. Many things need to be done by entrepreneurs to produce quality products. Besides that Deming's theory management especially stresses improving quality for sustainability in productivity will be used in this research paper. This concept paper will benefit to all Malaysian entrepreneurs that involve in herbs industry.

Keywords: Quality, Quality Management, Sustainability, Business Competitiveness and Marketing.

INTRODUCTION

Pharmaceutical products that produced by the Malaysian pharmaceutical industry can be broadly categorized as:

- i. Prescription
- ii. Over-the-counter (OTC)
- iii. Traditional medicines
- iv. Health and Food supplements

This paper discusses the importance of quality management in confirming the success of Traditional Medicine(TM) in Malaysia as Malaysian government has identified it as a strategic industry which should be promoted.

Although Traditional Medicines may be sold by non-professional outlets and public but it's still bind to the procedures, regulations and restrictions. It is very crucial to any firm that intends to expand its business locally and overseas as there are the International Standard regulations and restrictions that has been drafted in accordance with the rules given in the ISO Directives, Part 2. ISO (The International Organisation for Standardization) which is a worldwide federation of national standard bodies. A quality management system could become the strategic approach for an organisation to sustain in TM business. It is always implemented as a written document which is specified in the International Standard as requirements of the products. According to EU/PICS cGMP the principle of Quality Control is:

Quality Control is concerned with sampling, specifications and testing as well as the organisation, documentation and release procedures which ensure that the necessary and relevant tests are carried out, and

the materials are not released for use, nor products are released for sale or supply, until their quality has been judged satisfactory

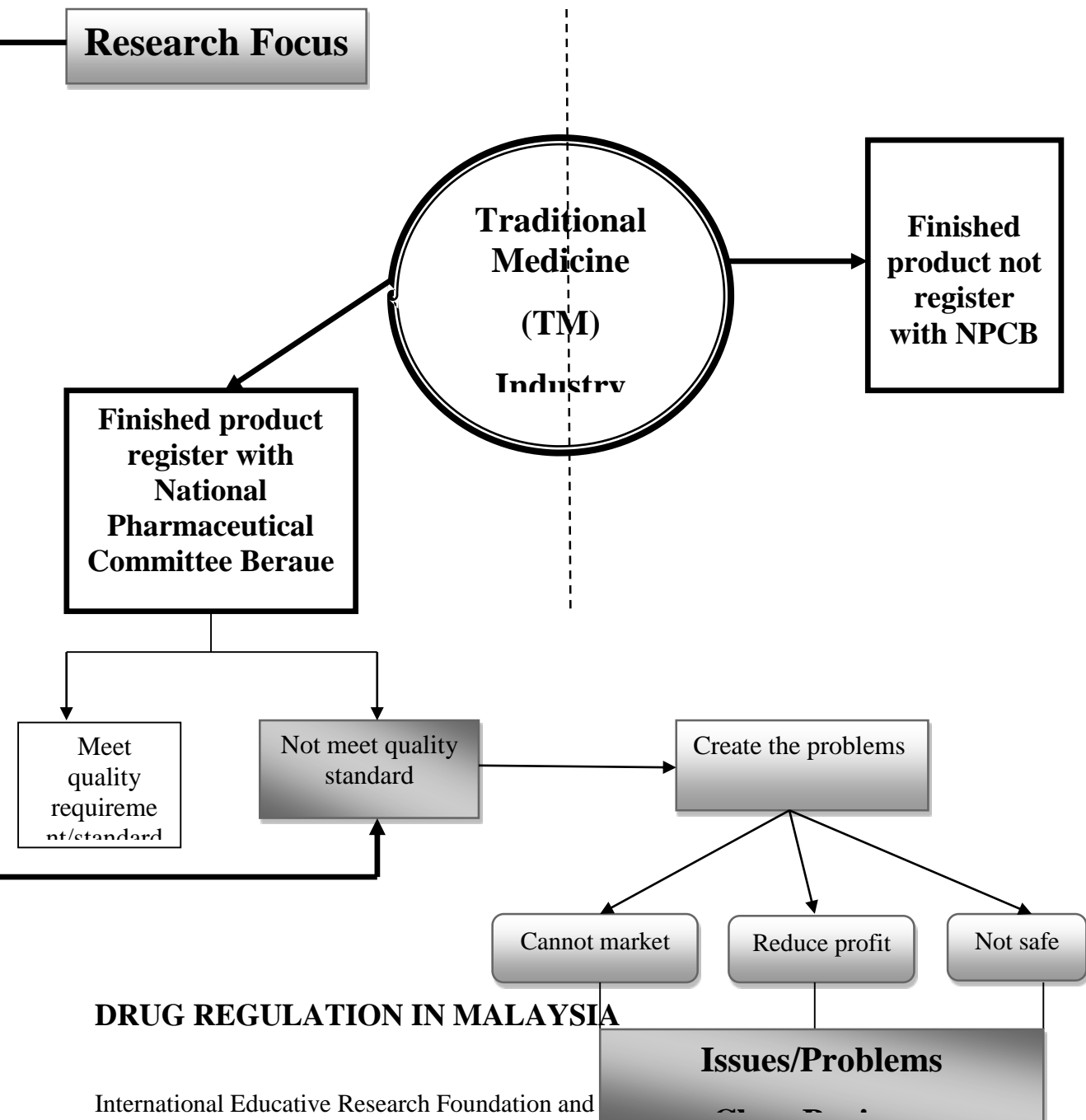
Quality Control is not confined to laboratory operations, but must be involved in all decisions which may concern the quality of the product.

The independence of quality Control from production is considered fundamental to the satisfactory operation of Quality Control

It is most effective when it is an integral component of firm strategy, defining how the organization will successfully engage customers' needs, prospects, and competitors in the market arena.

The main customers for TM industry in Malaysian are National Pharmaceutical Bureau Control (NPBC) and public users. Every product need to be passed relevant tests before they get the registration number by NPBC.

RESEARCH FOCUS



DRUG REGULATION IN MALAYSIA

Reported by Pacific Bridge Medical (Ames Gross and Rachel Weintraub,2005) the value of healthcare industry in Malaysia is around RM4 billion and growing at a steady rate of 6-8 percent annually. However, Malaysia still imports more than half of its pharmaceuticals and medical equipment, with U.S, Japan and Germany as its largest importers. Malaysian government considers the country's healthcare industry as one of its priorities, and continually strives to implement new schemes to help boost the country's medical sector.

Drug Control Authority (DCA) is the regulator for Pharmaceuticals in Malaysia ,under the Control of Drugs and Cosmetics Regulations 1984.The DCA is managed by the Director General of Health, Director Pharmaceutical Services, Director of the National Pharmaceutical Control Laboratory, and seven other appointed members. The DCA main responsibility is to ensure the safety, quality and efficacy of pharmaceuticals in Malaysia. The DCA's duties include (1) reviewing registration applications for drugs and cosmetics,(2) licensing importers, manufacturers and wholesalers,(3) post-marketing safety surveillance, and(4) adverse drug reaction (ADR) monitoring.

POPULATION AND SAMPLING

The sample for this PILOT study included quality works and professionals from Malaysian herbal and manufacturers throughout Malaysia. Thirty (30) peoples had been selected to answer research questions. All respondents, working in the herbal and pharmaceuticals manufacturers relates to medicine, and register with MIPO experience. . The research data is collected via the survey method. Creswell (2003) defines a survey method as a "numeric description of trends, attitudes, or opinions of a population by studying a sample of the population. Leedy and Ormrod (2005) stated that the goal of survey research is to learn information about a large population by surveying a sample of that population. The present research has been conducted on survey method to examine the hypothesis and the model of modification on the Deming path analysis model. The data and results of a quantitative approach can provide a general picture of the research problem (Creswell, 2005). In this surveys questionnaire is distributed to the respondent. Questionnaires are printed on paper-and-pencil or pen are used as instruments to the respondent to complete the questionnaires.

This pilot study questionnaire was divided into eight(8) parts by analyse the result of original Deming Model. Part 1 was used to obtain demographic information about the respondent. Part 2 was used to characterize the company's visionary leadership. Part 3 characterized the company's internal and external cooperation. Part 4 contained questions focused on learning organization. Part 5 was used to ask about process management. Part 6 talking about the continuous improvement. Part 7 is about the employee fulfillment. Part 8 Internal evaluation on customer satisfaction.

THE PATH ANALYSIS RESULT OF ORIGINAL DEMING MODEL AND CONCLUSION

The model was tested using model fit indices. The model fit showed that the original Deming model was acceptable where all hypothesis paths were significant at $p < .05$ levels. As conclusion the questionnaires was being used allowed feedback from a large number of employees and it allowed each employees the opportunity to provide anonymous feedback on their experience. Structured questionnaires were being used in this research allowed for the exploration of patterns and trends which help to describe what is happening in the real context of traditional medicine business in Malaysia and provide a measure of respondents' opinions, attitudes, feelings,

and perceptions about issues of particular concern to the evaluator. They also help to identify patterns and trends that merit further exploration using qualitative methods (Cohen, 2000).

REFERENCES

- Ames Gross and Rachel Weintraub, *Pacific Bridge Medical* (2005)
- A. Khan, J. Allgood, L.A. Walker, E.A. Abourashed, D. Schelenk and W.H. Benson, *Determination of heavy metals and pesticides in ginseng products*, *J. Assoc. Anal. Chem.* **84** (2001), pp. 936–939.
- A.H. MacLennan, D.H. Wilson and A.W. Taylor, *Prevalence and cost of alternative medicine in Australia*, *Lancet* **347** (1996), pp. 569–573.
- A.M. Au, R. Ko, F.O. Boo, R. Hsu, G. Perez and Z. Yang, *Screening methods for drugs and heavy metals in Chinese patent medicines*, *Bull. Environ. Contamin. Toxicol.* **65** (2000), pp. 112–119
- A.M. Li, M.H. Chan, T.F. Leung, R.C. Cheung, C.W. Lam and T.F. Fok, *Mercury intoxication presenting with tics*, *Arch. Dis. Childhood* **83** (2000), pp. 174–175
absorption spectrophotometry. Perkin–Elmer Corporation, CT, USA, pp. 1–8.
- Abegglen, James C. 2006 21st-century Japanese management: new systems, lasting values
- Adam Jr., E.E., 1994. Alternative quality improvement practices and organisation performance. *Journal of Operations Management* **12**, pp 27-44 Abstract | PDF (1649) | View Record in Scopus | Cited By In Scopus (84)
- Ahire, S.L., Goihar, D.Y. and Waller, M.A., 1996. Development and validation of TQM implementation constructs. *Decision Sciences* **27** 1, pp. 23-56 Full Text via Cross Ref
- Ahsan, A.A., 2000. *Ubatradisional turutrosakkan buah pinggang (Traditional medicines cause kidney damage)*. Utusan Malaysia, 5 August, 2.
- Anderson, C. & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin* **103** (3), 411-423.
- AMC, 1994, *Leading the Way: A study of best manufacturing practices in Australia and New Zealand*, Australia Manufacturing Council, November.
- Armand V. Feigenbaum, (August 1, 2004). *Total Quality Control*, 4th edition, McGraw- Hill Professional
- Australian Quality Council, 1994, *Australian Quality award criteria assessment guidelines*, Sydney, Australia.
- Bass, B. M., 1985. *Leadership and performance*, Free Press, New York.
- Beaty, R.D., Kerber, J.D., 1993. *Concepts, instrumentation and techniques in atomic*
- Bemowski, K. And Stratton, B., 1995. How do people use the Baldrige award criteria. *Quality Progress* **28** 5, pp. 43-47 View Record in Scopus | Cited by in Scopus (14) Bentler, 1993.
- Berita Harian, 24.4.2006

- Bhide.A (2000).*The Origin and Evolution of New Businesses*
Breimer and P. Speiser, Editors, *Top. Pharm. Sci.*, Elsevier Science, Amsterdam (1983), pp. 417–423.
- Bruce, Anne, (2003). How to motivate every employee: 24 proven tactics to spark productivity in the workplace
Business Times (NST), 29.12.2005
Butterworth Heinemann
- Byrne, B.M. (2010). *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, 2nd edition. New York: Routledge Taylor and Francis Group.
- C.Ong and J. Norzalina, *Malay herbal medicine in Gemencheh, Negri Sembilan, Malaysia, Fitoterapia* **70** (1999), pp. 10–14.
- C.Chuang, K.S. Chen, Y.L. Huang, P.N. Lee and T.H. Lin, *Determination of trace elements in some natural drugs by atomic absorption spectrometry, Biol. Trace. Elem. Res.* **76** (2000), pp. 235–244.
- C.G. Bruhn, A.A. Rodriguez, C. Barrios and V.H. Jaramillo, *Determination of total mercury in scalp hair of humans by gold amalgamation cold-vapour atomic absorption spectrometry, J. Anal. Atom. Spectrom.* **9** (1994), pp. 535–541.
- C.M.Y. Choy, C.W.K. Lam, L.T.F. Cheung, C.M. Briton-Jones, L.P. Cheung and C.J. Haines, *Infertility, bloodmercury concentrations and dietary seafood consumption: a case-control study, BJOG Int. J. Obstet. Gyn.* **109** (2002), pp. 1121–1125.
- Cohen, J., Cohen, P., West, S.G., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. (3rd ed.).
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: SAGE.
- Creswell, J.W. (2005) *Educational research: Planning, conducting, and evaluating qualitative and quantitative research* (2nd ed). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1, 16-29
- D. Eisenberg, R.B. David, S.L. Ettner, S. Appel, S. Wilkey and M.V. Rompay et al., *Trends in alternative medicine use in the United States, 1990–1997, J. Am. Med. Assoc.* **280** (1998), pp. 1569–1575.
- De Vaus, D. (2001). *Research Design in Social Research*. London: Sage Publications.
- Drucker.P(1994)*Innovation and Entrepreneurship*,
- E. Ernst and A.R. White, The BBC survey of Complementary Medicine use in the UK, *Complementary Therap. Med.* **8** (2000), pp. 32–36.

- E. Ernst and J.G. Lauritsen, *Effect of organic and inorganic mercury on human sperm motility*, *Pharmacol. Toxicol.***68** (1991), pp. 440–444.
- E. Ernst, M. Christensen and J.G. Lauritsen, *In vitro exposure of human spermatozoa to mercuric chloride – a histochemical study*, *Prog. Histochem. Cytochem.***23** (1991), pp. 263–268.
- E. Ernst, Risks associated with complementary therapies. In: M.N.G. Dukes and K. Aronson, Editors, *Meyley's Side Effects of Drugs*, Elsevier, Amsterdam (2000), pp. 1649–1681.
- E. Ernst, *The role of complementary and alternative medicine*, *Brit. Med. J.***321** (2000), pp. 1133–1135.
- E. Ernst, *Why complementary medicine?*, *Perfusion***11** (1999), p. 437.
- E. Kang-Yum and S.H. Oransky, Chinese patent medicine as a potential source of mercury poisoning, *Vet. Hum. Toxicol.***34** (1992), pp. 235–239.
- E. J. Newman, *Quality in the Analytical Chemistry Laboratory*, John Wiley (1995), pp. 33–66.
- E. O. Espinoza, M.J. Mann and B. Bleasdel, *Arsenic and mercury in traditional Chinese herbal balls* [letter], *New Engl. J. Med.***333** (1995), pp. 803–804.
- Friedman, R.A., 1996. *Natural doesn't mean safe*. The New York Times, 19 April, A29.
- G. Lindstedt, A rapid method for the determination of mercury in the urine, *Analyst***95** (1970), pp. 264–271.
- G.J. Garvey, G. Hahn, R.V. Lee and R.D. Harbison, *Heavy metal hazards of Asian traditional remedies*, *Int. J. Environ. Health Res.***11** (2001), pp. 63–71.
- Green, Thad, (2000). Motivation management: fuelling performance by discovering what people believe about themselves and their organizations
- H. Sastre, A. Sahuquillo, M. Vidal and G. Rauret, *Determination of Cd, Cu, Pb, and Zn in environmental samples: microwave-assisted total digestion versus aqua regia and nitric acid extraction*, *Anal. Chim. Acta***464** (2002), pp. 59–72.
- H. Schilcher, *Contamination of natural products with pesticides and heavy metals*. In: D.D.
- H.H. Ang and K.L. Lee, *Contamination of Mercury in Tongkat Ali Hitam Herbal Preparation*
H.I. Popescu, Poisoning with alkylmercury compounds, *Brit. Med. J.***1** (1978), p. 1347.
- Hair, J.F., Black, B., Babin, B., Anderson, R.E., & Tatham, R.L. (2005). *Multivariate Data Analysis*. 6th Edition. New York: Prentice Hall.
- Harold Koontz & Heinz Wiehrich (1992). *Pengurusan*, Dewan Bahasa dan Pustaka
- Hickman & Robinson G., (2010). Leading change in multiple contexts: concepts and practices in organizational, community, political, social, and global change settings
- Holmbeck, G. N., (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology, Special Issue on Methodology and Design* 27(1), 87-96.

- J. Kew, C. Morris and A. Aihic, *Arsenic and mercury intoxication due to Indian ethnic remedies*, *Brit. Med. J.***306** (1993), pp. 506–507.
- J. Treleavan, S. Meller, P. Farmer, D. Birchall, J. Goldman and G. Piller, *Arsenic and ayurveda*, *Leuk. Lymphoma***10** (1993), pp. 343–345.
- Jaafar, L., 1995. *Penilaian kualiti ubat-ubatan tradisional untuk ujian pendaftaran. (Evaluation of the quality of traditional medicines for testing prior to registration)*. In: Proceedings of the Paper Presented at the National Convention for Medicinal Plants, Forest Research Institute Malaysia, Kuala Lumpur, Malaysia, 13–15 October, pp.41–47. *Journal H Experimental Toxicology*, 2003
- Kamarudin, M.S., Latiff, A., 2002. *Tumbuhan Ubatan Malaysia*, Universiti Kebangsaan Malaysia and Ministry of Science, Technology and Environment, Malaysia, pp. 625.
- Kerajaan Negeri Pahang (2004) *Maklumat Asas Sektor Pertanian Kuantan*: Jabatan Pertanian Negeri Pahang
- Kerajaan Negeri Pahang. (2002) *Merancang Masa Depan Pahang, Rancangan Struktur Negeri Pahang* Kuantan: Jabatan Perancang Negeri Pahang
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. NY: Guilford Press.
- Kotler, P. (1991). *Marketing Management, Analysis, Planning, Implementation, and Control*. 7th Edition. Prentice-Hall International
- Kotler, P. (2000). *Marketing Management*. Millenium Edition Prentice Hall International Inc.
- Kuala Lumpur, ECERDC (2008) *Imbasan Pembangunan Wilayah Ekonomi Pantai Timur (ECERDC)*, 2008 Kuala Lumpur: Kementerian Pertanian Malaysia.
- Leech, N.L., Barret, K.C., & Morgan, G.A. (2008). *SPSS for intermediate statistics: Use and interpretation*. 3th Edition. New York: Lawrence Erlbaum Associates
- Leedy, P., & Ormrod, J. (2005). *Practical research: Planning and design* (8th ed.). Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.
- M., Alpert, F., Perner, L. *International Journal of Research in Market segmentation for competitive product diffusion models*". (1999) Michael A. Kamins, Valerie S. Folkes and Lars Perner *Journal of Consumer Psychology*, Vol. 6, No. 2 (1997), pp. 165-187
- M.K. Wong, P. Tan and Y.C. Wee, *Heavy metals in some Chinese herbal plants*, *Biol. Trace Elem. Res.***36** (1993), pp. 135–142.
- Mahmood, M. (2008) *Bioteknologi Dalam Perubatan*
- Malaysia (2003) *Annual report national pharmaceutical control bureau. 2003*. National pharmaceutical control bureau, Ministry of Health Malaysia, Kuala Lumpur, pp. 16–17.
- Malaysia *Newsletter of the Drug Control Authority Malaysia*, 2001. vol. 18. National Pharmaceutical Control Bureau, Ministry of Health Malaysia, Kuala Lumpur, pp. 8–9.

- Malaysia (2008), *Di Luar Lingkaran: Usaha bangun bioteknologi berliku* Kementerian Sains, Teknologi dan Inovasi.
- Malaysia (1999).*Dasar Pertanian Negara Ketiga(1998-2010)-Dimensi Baru*.
- Malaysia (2008),*Industries in Malaysia* .Malaysia Industrial Development Authority.
- Malaysia (2009). *National Timber Industry Policy 2009-2020*.
- Malaysia *Compendium of Medicinal Plants used in Malaysia*, 2002, vol. 2. *Herbal Medicine Research Group*, Institute for Medical Research, Kuala Lumpur, Malaysia, 245–246.
- Malaysian Adverse Drug Reactions Advisory Committee (MADREC) Annual Report, 2000- 2008
- Malaysian Organization of Pharmaceutical Industries (MOPI),Module 5: Good Quality Control Laboratory Practices, (2010)
- Meyers, L.S., Gamst, G., and Guarino, A.J. (2006). *Applied Multivariate Research: Design and Interpretation*. Thousand Oaks, California: Sage Publications, Inc
- Michael A. Kamins, Valerie S. Folkes and Lars Perner *Journal of Consumer Psychology*, Vol. 6, No. 2 (1997), pp. 165-187 (article consists of 23 pages)
- Micheal Treacy and Fred Wiersema.,(2003), *The Discipline of Market Leaders* Ministry of Plantation Industries and Commodities.
- Muhamad, Z., Mustafa, A.M., 1994. *Traditional malay medicinal plants*, FajarBaktiSdn. Bhd., Kuala Lumpur, pp. 40.
- N.S. Sheerin, P.N. Monk, M. Aslam and H. Thurston, *Simultaneous exposure to lead, arsenic, and mercury from Indian ethnic remedies*, *Bri. J. Clin. Pharmacol.***48** (1994), pp. 332–333.
- Ng, S.A., 2004. *Steroids among drugs seized*. The Star, 26 May 4.
- Ong.H.H.(2008).*Tumbuhan Liar Khasiat & Kegunaan Lain*. Oxford University Press
- P.W. Woods, *Herbal healing*, *Essence***30** (1999), pp. 42–46.
- R.J. Ko, *Adulterants in Asian patent medicines*, *New. Eng. J. Med.***339** (1998), p. 847
- Ramli A.G.” Bio Herbal” Kementerian Kesihatan Malaysia
- Ramli, A.G., 2001. *Regulatory control on toxic heavy metals and therapeutic drugs*. In: Proceedings of the Paper Presented at the Third International Congress of the Asia Pacific Association of Medical Toxicology, Abstract 95, Bayview Beach Resort, Penang, Malaysia, 12–15 November.
- Robert A. Yaffee, 2000.*An Introduction to Time Series Analysis and Forecasting: With Applications of SAS® and SPSS*

- Rothwell & William J., (2005). *Beyond training and development: the groundbreaking classic on human performance enhancement*
- S. Landi and F. Fagioli, *The Adaptation of the dichromate digestion method for total mercury determination by cold-vapour atomic absorption spectrometry to the analysis of soils, sediments, and sludges*, *Anal. Chim.Acta***298** (1994), pp. 363–374.
- S.B. Adeloju, H.S. Dhindsa and R.K. Tandon, Evaluation of some wet decomposition methods for mercury determination in biological and environmental materials by cold-vapour atomic absorption spectroscopy, *Anal. Chim.Acta***285** (1994), pp. 359–364.
- S.B. Adeloju, H.S. Dhindsa and R.K. Tandon, *Evaluation of some wet decomposition methods for mercury determination in biological and environmental materials by cold-vapour atomic absorption spectroscopy*, *Anal. Chim.Acta***285** (1994), pp. 359–364.
- Saras, L., 2003. *Protect traditional medicine industry*. Medical Tribune 1–15 February, pp. 5.
- Shamala, G., 2001. *Concern over safety of herbal remedies*. The Sun, 3rd June, pp. 15.
- Sikora D. & Hattan J., (2009). Business and production for games: a gamedev.net collection
- Siti Z.T, (2008) *Tumbuhan Sebagai Ubat-Ubatan*
- Stevens, J.P. (2002). *Applied multivariate statistics for the social sciences* (4th ed). Hillsdale, NJ: Erlbaum.
- Taha, A.M., 2002. *Traditional/complementary medicine in the Malaysian health care system*. In: Proceedings of the Keynote Address Presented at the Fourth International Conference for Traditional/Complementary Medicine, Sunway Pyramid Convention Centre, 14 October.
- Tiantoro Safaria, 2011. Relationship between leadership practices, role stressor, religious coping and job insecurity with job stress among university academic staff: A mixed –method cross cultural study
- USA ,*Environmental Protection Agency. EPA test methods for evaluating solid waste*, 1986, vol. 1, A. Laboratory manual physical/chemical methods, Environmental Protection Agency, Washington, DC, USA.
- Utusan Malaysia, 26.6.2008. *Malaysia Mendahului Singapura Dalam Bioteknologi*
- Utusan Malaysia, 9.7.2007, *Kopi Tongkat Ali Kurang Khasiatnya*. Dr. Rasadah Mat Ali. Utusan Publications & Distributors Sdn. Bhd.
- Utusan Malaysia , 20.6.2008, *Syarikat India Labur RM450 juta majukan bio terapeutik*. Lukman Ismail
- V.P. Antonovich and I.V. Bezlutskaya, *Speciation of mercury in environmental samples*, *J. Anal. Chem.***51** (1996), pp. 106–113.
- W.C. Scheffler, *Statistics for health professionals*, Addison-Wesley Publishing Company, MA, USA (1984), pp. 107–123.

W.L. Liang, S.W. Lin, K.Y. Yen and L.L. Yang, Metal element analysis of commercial Chinese herbal medicines, *Taiwan Kexue* **51** (1998), pp. 37–56.

W.M. Gessler, *Therapeutic landscapes: medical issues in light of the new cultural geography*, *Soc. Sci. Med.* **34** (1992), pp. 735–746.

WHO. 2002. *Herbal medicines*, vol. 16. World Health Organization, Geneva.

Wiersema, *The Discipline of Market Leaders* (1993)

William O. Welsh (III.), (2007). *Transformation Changes Everything: Exploring Organizational Leadership Challenges in an "aspiring-to" Transformative Environment*, ProQuest.

World Bank Data Facts, 2008

Zaidi, I.I., 2002. *Herbal products enjoying growing demand*. Dr. Lim. (Ed.), *The New Straits Times*, 21 August, B6.

Zhang, X.R., 2002. *Traditional medicine with health care and the impact of globalization on protection of traditional medicine*. In: *Proceedings of the Seventh International Conference on the Impact of Globalization on Development and Health Care Services in Islamic Countries*, Kuwait, March.