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AbMTM: POST COVID-19 ADVENTURE-BASED MENTAL TOUGHNESS TRAINING MODEL

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ABSTRACT

To date, cases in COVID-19 have accelerated with new cases surfacing almost every day. Along with the issue, numerous cases related to mental health problem such as levels of anxiety, depression and attempting suicides were recorded. These problems claim to be associated with individual mental toughness. Work on this matter, it is a call to invent solutions. The innovation of Adventure-based Mental Toughness Model (AbMTM) rooted in the systematic modified Design and Development Research (DDR: Saedah et. al., 2020). A total of 14 field's experts and 507 respondents was involved in a series of analysis using Structural Equation Modelling (SEM). The AbMTM is a validated model with the excellence model fit (GoF). The innovation of AbMTM potentially contributes to Malaysian active adventure-based training practitioners and professional. AbMTM also significantly becomes a part of the solutions in purpose to regain or improve mental toughness to more than 50% Malaysian population that involved with active recreation (IYRES: Sports Index 2017, 2018, 2019) in post pandemic era. AbMTM useful to the adventure-based training program practitioners and professional to redesign and adapt their training programs that suit the current training needs in post pandemic era. AbMTM offers new collaboration mental toughness attributes and as communication tools to understand the development throughout the intervention of adventure-based training program. The term of adventure-based training that commonly refers to teambuilding, team cohesiveness and individual development is now shifted to be more relevant towards challenges and opportunities after pandemic outbreak. To conclude, with AbMTM, adventure-based training industry in Malaysia are ready to accept change and evolve with time in post pandemic era.

Keywords: Adventure-based Mental Toughness Model (AbMTM), Structural Equation Modelling (SEM)

ADVENTURE-BASED MENTAL TOUGHNESS MODEL (AbMTM)

It should be noted, this innovation considerably as the first attempt to develop a specific model of mental toughness in adventure-based program setting. Despites several studies related with mental toughness was conducted by local researchers (Shariman & Hisyam, 2014; Anizu,

Kumaraswamy, Singh & Rusli, 2003; Kuan & Roy, 2007), but none conducted specifically in focus of adventure-based mental toughness model development. This innovation focus on the conjunction between intervention of adventure-based program and mental toughness. Through the development and validation processes, the irrelevant and unrepresentative items of the developed instrument were minimized. Importantly, this innovation also verified the effectiveness of adventure-based program in improving mental toughness.

Furthermore, this innovation considered as the new horizons in designing adventure-based mental toughness training program. The current knowledges in the area are expanded as to foster deeper understanding on the problems. Malaysian outdoor recreationist, professional and outdoor recreation related-industry practitioners eventually assisted by this innovation for their works. AbMTM utilized as guidance to design and boost the impact of adventure-based mental toughness program effectiveness.

Adventure-based training program

Globally, it is undeniable that adventure-based programs have grown exponentially. In addition, as stated by Priest (1986) when he clearly emphasized how the adventurous-based program has grown exponentially with the diversity of its branches. This can also be seen through the increasing number of field studies that also contribute to this development.

Over decades, numerous researchers worked hard to prove outdoor adventure program develop participant's psychology aspects positively (Williams et. al., 2018; Williams & Allen, 2012; Clough et. al., 2016; Ewert & Yoshino, 2011; Bowen & Neill, 2013; Darst & Armstrong 1980; Ewert, 1989; Taylor, 1989; Webb, 1989; Boyle, 2002; Sheard & Golby, 2006; Wang, Liu, & Kahlid, 2006; Gatzemann, Schweizer & Hummel, 2008). These studies are very important in understanding the concept of adventure-based programs in the development of psychological aspects.

As example, Adventure Model was introduced by Ewert (1987) as a fundamental model to explain outdoor adventure pursuits. On the basis, Ewert highlighted four core variables of outdoor adventure, which are the 1) social orientation; 2) locus of control; 3) type of risk; and 4) motivations. The main idea in this model is how individual who involved in adventure-based program can effectively increase their mental and physical skills.

Additionally, the nature of adventure-based program in the open environment and weather known apparently related to risks, challenges, difficulties, and pressure (Virden, 2006). The experienced in the difficulties in the adventure-based program can be considered as the concept of the hardiness by (Crust, 2011). This idea is also in line with Swann, Crust and Allen-Collinson (2016) when they stated the experience of facing and overcoming past difficulties has a significant impact on mental toughness.

Mental toughness attributes

The concept of mental toughness is not new area of focus and its origins in academic research on sport. Loehr (1986), in his fundamental study defined mental toughness as when an individual is reflected in varying ways, which enable them to remain feeling relaxed, calm, and energized despite under pressures. Over decades, numerous studies have been conducted in effort to reveal what is mental toughness. Middleton et al. (2004a) defined mental toughness as a consistency or persistency to achieve

the goal despite in the tough, pressure or difficult situation. They also highlighted mental toughness as the unshakeable perseverance and conviction of an individual to overcome any adversities. Based on this definition, mental toughness is listed as one of the most important aspects of psychology. Supporting the idea, Gucciardi, Gordon, and Dimmock (2009) described mental toughness as a superior mental quality, and it is one of the important psychological constructs for performance in athletics context.

However, most of the studies were conducted based on the sports performance and coaching perspective. There are also several established sport-based mental toughness model (Loehr, 1986; Fourie & Potgieter, 2001; Jones, Hanton, & Connaughton, 2002; Middleton et al., 2004a; Gucciardi & Gordon, 2009; Clough, 2002). To sum, lack of the studies has integrated the adventure-based program and mental toughness. It considerably narrowing the perspective of mental toughness. According to Middleton et al. (2004), there are a limited number of quality studies on mental toughness been conducted, especially in the broad concept and perspective. Moreover, several common mental toughness attributes were found based such as self-confidence, motivation, coping skills, focus, challenge, control, and commitment.

VALIDATION OF AbMTM

In this innovation, 38-items measurement model was developed and tested among 507 (N=507) respondents to examine the reliability and validity. This validation process was believed to foster accurate value of reliability of the items in each construct (Marzita, 2012; Hair, 2006; Zakaria, 2010). The values from the analysis assisted the researcher to further the analysis. Next, the researcher work on the Modification indices (MI).

MI indicate how much the chi-square value of a model would drop if the parameter were free instead of constrained. MI assisted in improving model fit. This process again purifies and reduce the item. At this stage model fit also determined and AbMTI items also finalized.

In the last phase of the analysis, the researcher conducted a reliability and validity test. The study focused on several validation such as the Cronbach Alpha (interval consistency) (Ahmad, 2014; Omar, 2021), construct reliability (CR=>0.70) (Marzita, 2012), and Average variance extracted (AVE=>0.50) (Kline, 2010) that commonly to use to assess convergent validity. The validation of the model considerably as the final output of the study.

Figure 1 also recorded 7-constructs of AbMTM achieved minimum AVE (>.50) with Self Confidence (.51), Motivation (.55), Coping Skill (.51), Focus (.55), Challenge (.54), Control (.54), and Commitment (.52). The convergent validity is achieved and supporting the previous analysis for construct validity. Given that the model fits to the data adequately and all items loading represented constructs are above 0.50.

The Goodness of Fit (GoF) of AbMTM also recorded significant data. Referred to Figure 4.14.3a, the final examination on AbMTM provides greater fit to the data ($\chi^2 = 1.904$, $p = .000$). The GFI is .839 AGFI = .792, NFI = .815, TLI = .924, CFI = .931 and RMSEA = .050. As conclusion, AbMTM achieved it reliability and validation and was strongly suggested model fit.

AbMTM useful in future adventure-based training program and believed to becomes part for many organizations or institution. Post pandemic era surely seeking for adventure-based training program that equipped with wellness aspect as to deal with individual mental toughness. AbMTM eventually assists adventure-based training practitioners and professional to be more focused on creating programs and techniques in improving individual or group mental toughness.

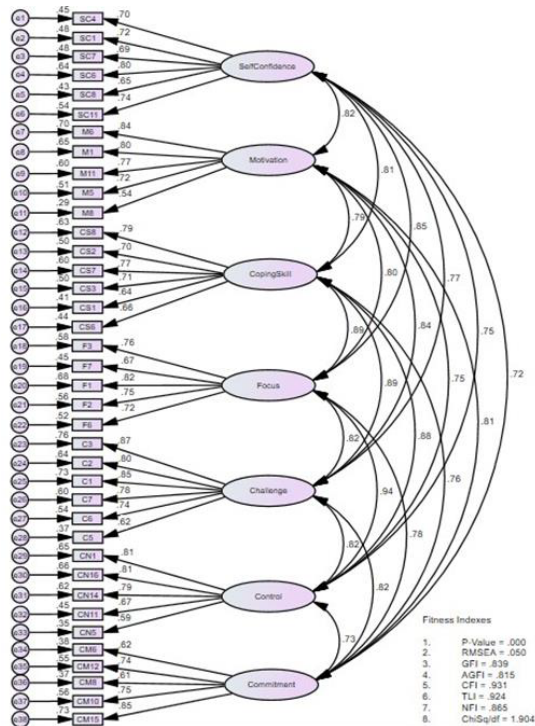


Figure 1: AbMTM validation (GoF)

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