THE MORAL IDENTITY OF YOUTH WHO DO NOT SMOKE: INTERNALIZATION PREDICTS THEIR PREFERENCE TOWARDS SMOKING AND NON-SMOKING BEHAVIOUR

Muaz Haqim Shaharum 1, Nasir Yusoff 1*, Azwa Abdul Aziz 2, Kuay Hue San 3, Sabarisah Hashim 1 and Roslee Ahmad 4

1Department of Neurosciences, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.
2Faculty of Informatics Computing, UniSZA, Besut Campus, 22200 Terengganu Malaysia
3Department of Psychiatry, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.
4Faculty of Leadership and Management, Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia.

*Corresponding author: Nasir Yusoff
Email: nasirff@usm.my

ABSTRACT

A mature sense of moral identity influences psycho-social behaviour and leads to less engagement in risk behaviour activities such as smoking. This study aims to identify whether moral identity (internalization, symbolization) and gender are predictive factors of emotional valence in response to smoking and non-smoking images. Youth-aged participants (N=347) viewed a series of smoking and non-smoking images and rated their emotional valence by using the Self-assessment Manikin. They also responded to the internalization and symbolization items on the Moral Identity Scale. The combination of gender and internalization factors explained the significant variance of emotional valence in smoking (12%) and non-smoking (7%) respectively. Participants with low internalization exhibited 2.4 odds to experience high emotional valence from the smoking images than those with high internalization. Internalization also indicated a significant predictor of emotional valence in non-smoking images. Internalization is a dominant trait rather than symbolization in predicting smoking and non-smoking behaviour. Gender interplays with internalization to provide an insightful explanation of emotional variance in smoking and non-smoking behaviour. Implication on public health program among youth-aged group is highlighted.

Keywords: Moral identity, valence, smoking behaviour, risk taking behaviour, emotion

INTRODUCTION

Adolescents and youth are the crucial sub-group of the population because this phase of life is a transition period from childhood to adulthood, accompanied by dramatic biological and psychological transformations in response to change in hormone, thinking process and social life 1. This life cycle is known as a very challenging life period depicted by high involvement in risk-taking behavior 2. They indicate behavioural preference towards experimenting and taking risks that place their health at high risk. Risk taking behaviour is also considered as one of the important domains in adolescence and youth life cycle, which is associated with the increased rates of antisocial, norm-breaking, and criminal behaviour 3.

The Ministry of Health, Malaysia outlines smoking behaviour as one of the major delinquent behaviours alongside drug addiction, alcoholism, violence and unintentional injury, sexual risk behaviour and dietary behaviour 4. Official report from the Youth Risk Behavior Surveillance System identifies and discards six areas of risk-taking behaviours among youth age group including tobacco use 5. Smoking habit has long been identified as a threat to health with significant social and economic impact. Tobacco use usually begins during adolescence and is reported that about 46% of the smokers began smoking between the ages of 18 and 20 years 6. Smoking behaviour also indicated a consequence on loss of productivity as estimated from the gross domestic product per equivalent full-time worker in Malaysia 7.

The interconnection between risk taking behaviour and morality among youth has been reported previously 8. Psycho-moral perspective coincided with the argument that the mature sense of moral identity may lead to better mental health and less risk-taking behaviors 9. Some people consider internal value as central to their identities (internalization), whereas others consider traits that are more external as central to their identities (symbolization) 10. This thought of moral identity is greatly influenced by Blasi Self Model - the influential model that points morality as not simply about what is right or wrong, instead it is about ‘self-defining’ 11. This model has long been standing on the fact that moral identity is being constructed from the extent to which being moral is central or essential to one’s sense of self. Different from other moral paradigms (such as
moral competency and moral reasoning), moral identity pursues a basic construct of self (self-conception), which is associated with certain beliefs, attitudes, and behaviors 12. Core theories concerning self-concept and social identity have also had an influence on the early construction of moral identity conceptualization 13.

Throughout this study, we measure the smoking risk behaviour by quantifying the valence domain of emotion that was captured through the visualization approach – the approach that is more sensible in capturing the dimension of emotion 14-15. This approach has made this study different from other studies surrounding smoking behaviour. Valence is a fundamental and subjective emotional experience defined by the emotional continuum of pleasantness and unpleasantness elicited by an event or thing 18. According to the Circumplex Model of Affect, valence is a fundamental component of the emotional structure that has been incorporated into numerous psychological conceptual frameworks 17-19. Gender factor was considered in the analysis as it is the well-known biological parameter that has an important role in psychosocial development and its implications for diverse health contexts have been proven in many previous reports, including the moral dimension 20. Gender also is a crucial determinant in mapping the behavioural pattern and how people interact in society 21.

From the above background and the specific psychological approach as mentioned, this study raises two research questions as follows (1) Does moral identity (internalization, symbolization) and gender predict the emotional tendency towards smoking behaviour? (2) Does moral identity (internalization, symbolization) and gender predict the emotional tendency towards non-smoking behaviour?

METHODS

Study Participants and Procedure
This study was designed cross-sectionally and implemented online. Potential participants were notified about the study through the advertisement (poster) disseminated in social media. Participants (N=347) were sampled conveniently. Selection of participants was based on the inclusion (i.e., literate, young people aged between 18 to 24 years old who did not smoke) and exclusion criteria (i.e., no vision problems and any background of psychological abnormality). Majority participation were female (N=241; 69%) with mean age of 22±1.7 years old. The whole process of study strictly adhered to the ethical standard outlined in the protocol as approved by the University Ethics Committee (JEPeM USM Code: USM/JEPeM/19120927). This institution applies the standard of ethic which complies to the Helsinki Declaration of 1975, as updated in 2000. Participants have the right to withdraw from the study at any point of time if they wish to. Their research data and personal information was kept confidential and was not publicly disclosed unless it is required by law.

Following participant consent, the following information was gathered:

1) Socio-demographic information
2) Self-Assessment Manikin (SAM) scores from their emotional condition whilst responded to the images of smoking behavior (ten images) and non-smoking behavior - healthy lifestyle (ten images)
3) Internalization score (three items) and symbolization score (five items) from the Moral Identity Measure.

Image of smoking and non-smoking behavior
A collection of digital images was sent to the participants to be viewed and rated. These images were classified into two groups i.e., 10 images of smoking behavior and 10 images of non-smoking behavior. The images of smoking behavior are a collection of images that display the activities of cigarette smoking (tobacco) and e-cigarette vaping among young people. Meanwhile the pictures of non-smoking behavior are a collection of pictures depicting the activities of healthy behavior such as swimming, camping, cycling and so on. All pictures are free of copyright and were obtained from the public source.

Prior to the distribution of the images to the participants, three academicians were employed to review the images in order to determine their content validity. Expertise (academicians) were required to assure the relevancy of the pictures in presenting the meaning of ‘smoking behavior’ and ‘non-smoking behavior’ as outlined in the operational definition of study protocol. In this evaluation, expertise rated the pictures by using four likert scale (i.e., 1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant). The evaluators’ scores were then used to compute the Content Validity Index (CVI) as below 22:

\[
\text{Number of X} = \frac{\text{Number of Evaluators} - \text{Number of X}}{\text{Number of X}}
\]

The X in the formula above refers to the 3 and 4 scores that were used to calculate the Content Validity Index (CVI) for each image. Scores of 1 and 2 were not taken into account. All images indicate the value of one that meets the CVI requirement of having such a value for acceptable content validity. Meanwhile, the internal consistencies are acceptable (Cronbach’s alpha of 0.97 for smoking images and 0.94 for smoking images). Technical bias was minimized as much
as possible by taking into account the brightness and size of the images sent to participants.

**Self-Assessment Manikin Scale**

An emotional domain of valence was measured using the Self-Assessment of Manikin, which is an effective, low-cost, and widely used scale. Valence is one of the emotional elements that describes one's internal affective state, which can be positive (attraction) or negative (rejection) and is initiated by environmental stimuli. Single measure of valence which ranges from one (indicating unpleasant emotion or unhappiness) to nine (indicating pleasant emotion or happy emotion) was used to determine the intensity of valence (Figure 1).

![Figure 1: Emotional continuum of self-assessment Manikin (SAM) for valence - 1 (unpleasantness) to 9 (pleasantness)](image)

**Moral Identity Scale**

The Moral Identity Scale was utilized to assess the internalization (intrinsic quality that important to one's self-concept; for example, “It would make me feel good to be a person who has these characteristics”) and symbolization (external quality by displaying a social identity based on moral characteristics; for example, “I often wear clothes that identify me as having these characteristics”) . In the analysis, five items from the symbolization domain were kept. Meanwhile, due to low factor loading, two internalisation items (out of five) were dropped (item number 4 - “I would be ashamed to be a person who had these characteristics” and item number 7 “Having these characteristics is not really important to me” ). Internal consistencies were acceptable for both domains (Cronbach’s alphas are 0.80 for internalization and 0.72 for symbolization). Participants were asked to imagine in their minds the following positive characteristics that might describe a person - caring, compassionate, fair, friendly, generous, helpful, hardworking, honest and kind, and give their answers for the eight moral identity items by rating the seven likert scale ranging from 1 (completely disagree) to 7 (completely agree). The psychometric properties of the original scale have been reported .

**Statistical Analysis**

Chi-square and binary logistic regression from the Statistical Package for the Social Sciences (SPSS) Version 26 was used to analyse the categorical nature of the data. Logistic regression was chosen as it performs well when the dataset is linearly separable and less prone to over-fitting of the data. Through the Forward LR method, the median split was used to transform the continuous data into categorical data as below .

(1) Internalization: median cut-off 19 (score ranged from 3-21)
(2) Symbolization: median cut-off 25 (score ranged from 5 to 35)
(3) Valence of smoking images: median cut-off 11 (score ranged from 10-90)
(4) Valence of non-smoking images: median cut-off 78 (score ranged from 10-90)

All the assumptions for the analysis were met prior to the above analysis.

**RESULTS**

Chi square analysis was performed to observe the zero-order correlation between each variable. Emotional valence of smoking indicated significant association with gender \( [X^2 (1) = 18.06, p=0.000] \) and internalization \( [X^2 (1) = 14.31, p=0.000] \). Nonetheless, emotional valence of smoking did not indicate any significant correlation with symbolization \( [X^2 (1) = 1.32, p=0.25] \) (Table 1).

As compared to the above, the pattern of zero order correlation is different for the emotional valence of non-smoking. All variables were seen to have significant correlation with each other in which emotional valence of non-smoking indicated significant correlation with gender \( [X^2 (1) = 6.6, p=0.01] \), internalization \( [X^2 (1) = 11.01, p=0.001] \) and symbolization \( [X^2 (1) = 7.45, p=0.006] \) (Table 2).

In the next stage of analysis, two models of logistic regression were proposed - First, the prediction of moral identity (internalization, symbolization) and gender on the emotional valence of smoking. Second, the prediction of moral identity (internalization, symbolization) and gender on the emotional valence of non-smoking.

Gender indicated a different effect between the emotional valence of smoking and non-smoking. In the analysis of emotional valence of smoking (Table 3), gender exhibited a significant predictor in both models - as a single predictor (Model 1) and in combination with internalization (Model 2). Both models indicated moderate effect of gender with Exp B of 2.8 respectively - Model 1: \( X^2 (df=1, N=347) = 17.41, p=0.000 \); Model 2: \( X^2 (df=1, N=347) = 16.53, p=0.000 \). This interprets that the odds of males’ emotional tendency towards smoking behaviour was 2.8 than females’ emotional tendency towards smoking behaviour.
In the meantime, internalization indicated a significant predictor only in Model 2 with Exp B of 2.4 \([X^2 (df=1, N=347) = 13.09, p=0.000]\). This interprets that the odds of participants with low internalization to experience high emotional valence from the smoking images was 2.4 times higher than those who had high internalization. Interestingly, the combination of gender and internalization increased the R-squared in Model 2 almost two-fold. This result indicated that gender and internalization explained 12% of the variance of the emotional valence from smoking images. Symbolization, however, was excluded from both models.

The binary regression analysis for the emotional valence from non-smoking images (dependent variable) as predicted by moral identity (independent variables) and gender revealed a different pattern of result (Table 4) as compared to the result in Table 3 above. In this model of analysis, internalization revealed as the significant predictors in both models, although the Exp (B) in both models are less than one - Model 1: \(X^2 (df=1, N=347) = 10.86, p=0.001\); Model 2: \(X^2 (df=1, N=347) = 12.03, p=0.001\). Gender, however, contributed to Model 2 with the Exp (B) value of 2 - \(X^2 (df=1, N=347) = 7.72, p=0.005\) and increased R-squared when combined with internalization. The final model proposed that internalization and gender explained 7% of the variance of the emotional valence from the non-smoking images. Symbolization, again, was not counted in both models.
Table 4: The prediction of gender, internalization and symbolization on emotional valence of non-smoking

<table>
<thead>
<tr>
<th>Model</th>
<th>R²</th>
<th>Wald</th>
<th>Exp (B)</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Internalization</td>
<td>0.04</td>
<td>10.86</td>
<td>0.5</td>
<td>0.3-0.7</td>
</tr>
<tr>
<td>Model 2: Internalization, Gender</td>
<td>0.07</td>
<td>12.03, 7.72</td>
<td>0.4, 2.0</td>
<td>0.3-0.7, 1.2-3.2</td>
</tr>
</tbody>
</table>

Note: Symbolization was excluded from Model 1 and 2.

DISCUSSION

This study highlights two important findings. Firstly, internalization, as opposed to symbolization, is a dominant trait in predicting the emotional valence of smoking and non-smoking images. However, the effect of internalization on the emotional valence from smoking images is greater (odds is more than two) than emotional valence from non-smoking images (odds is less than one). Secondly, gender is revealed as an important factor that interplays with internalization in predicting the emotional valence tendency towards smoking and non-smoking behaviour. As the participants in this study were non-smokers, the above findings should be taken with caution by excluding smokers.

The major strength of this study can be seen from the visualization approach that we used to measure the fundamental structure of emotion. In this approach, valence domain - one of the basic structures in the model of human emotion (known as the Circumplex Model of Affect), was focused as an important parameter to explain the human expression of pleasantness and unpleasantness as triggered by the environmental-related stimulus. Visualization is about our perception - how we perceive the image that we see around us. In our daily lives, we are involved in a lot of visualization in order to synthesize information from our surroundings, which is crucial for survival. This process not only involves our physical aspect, but our whole-body system including the biological and psychological aspect in order to interpret and to give meaning to what we see. Visualization also involves the element of emotion - the fundamental human nature that has been investigated widely in the field of social psychology to explore many aspects of human functioning. The visualization-oriented approach is greatly influenced by the Gestalt principle, which states that a person’s visual perception of something reflects the emotional disposition. This fact has been revealed by psychological research attempting to understand perception.

In moral psychology, judgement of the wrong and right behaviour is guided by the affective intuition and emotion. Meanwhile, emotional competence was used as a factor in predicting the construct of youth development. We focus and give attention to internalization - a trait in moral identity that has significant impact on smoking and non-smoking visualization. In the field of moral psychology, moral identity has been emphasized as a fundamental basis in human development that is central to one’s sense of self. In general, moral identity has demonstrated critical connection to psychosocial consequences. Positive sense of moral identity was reported to relate with less involvement in risky behaviour such as alcohol and substance misuse. This implicates to the report that risky behaviours have adverse consequence on the development of positive identity.

The significant prediction of internalization towards smoking and non-smoking behaviour could be explained from these two possibilities: (1) negative trend i.e., low internalization increases the odd of experiencing high emotional valence from smoking stimulus; (2) positive trend i.e., low internalization increases the odd of experiencing low emotional valence from non-smoking stimulus. This current fact, indeed, is in line with other reports that suggested that the sense of moral identity predicted most types of prosocial behaviour. Our understanding of the positive relationship between substance abuse and antisocial behaviour (which motivates us to comprehend the moral dimension) has been established. However, the evidence to explain the relationship between risky behaviour (including addiction) and prosocial behaviour is still lacking. Prosocial behaviours are defined by traits such as concern for others, a high level of empathy, and concern for the needs of others. They reflect positive moral practises that are connected to our internal quality (or ‘internalisation’). In the absence of sufficient data, it is not impossible to hypothesise that both must negatively covariate. Prosocial behaviour is claimed to be directly related to positive psychology and to improve people’s well-being. The concept of prosocial behaviour is based on the idea that it prevents and avoids antisocial behaviours or hostile attitudes. From the Espanza-Reig et al.’s review, they claimed that there is a propensity for these two variables - prosocial behaviour and addictive behaviour - to have a negative association. According to few studies conducted among adolescents, prosocial behaviour functions as a protective factor against the development of substance abuse disorders. On the other hand, individuals who struggle
with addiction tend to engage in fewer prosocial behaviours than those who do not 48-49.

We do not find symbolization as the significant predictor in both models of analysis. This current finding actually does not deviate much from some other studies that observed the inclination of the internalisation trait towards prosocial behaviour rather than symbolization 50. Although internalization and symbolization should indicate a positive association in the construction of moral identity, the inconsistency of these two characteristics is possible 51.

Gender indicates significant contribution in both models of analysis (emotional valence of smoking and non-smoking) with meaningful odds. However, the odds of emotional valence in males are higher in smoking model than non-smoking model. The higher R square (12%) of the combination between gender and internalization in explaining the emotional valence of smoking behaviour when compared to non-smoking behaviour (7%), indeed, demands more attention. Perhaps the strong influence of masculinity among males had given much effect on the almost two-fold increase of R2 in smoking behaviour than non-smoking. Smoking behaviour is said as one of the elements that increase the sense of masculinity among males 52. However, other than masculinity, it is suggested that peer pressure, imitating parents who smoke, feeling masculine and curiosity are among the predisposing factors that may increase the smoking prevalence among males 53. The interpretation of the finding should be taken cautiously as this study reported a direct association between smoking and moral identity without considering other factors such as personality. Personality is said to be one of the important factors that influence smoking behaviour 54-55.

CONCLUSION

Internalization is a dominant trait (compared to symbolization) of moral identity in predicting the emotional valence of youth towards smoking and non-smoking behavior. The magnitude of prediction from the combination of gender and internalization in explaining the emotional valence of smoking behaviour is higher than non-smoking behaviour. Gender factor contributes differently according to the types of moral identity. The findings of this study may strengthen the research on smoking behaviour and provide important insights towards the development of behavioural intervention programs related to young adult risk-taking behaviours.

Conflict of interest
The authors declare no potential conflict of interest.

ACKNOWLEDGEMENT

Universiti Sains Malaysia Research University Grant (Grant Number: 1001/PPSP/8012352)

REFERENCES


14. Yusoff N, Hashim S, Kuay HS, Reza F. One year is not enough to adapt with a new traditional culture: looking into the cultural heritage elements and practices among immigrants in Malaysia. JECS 2021; 8 (1): 66-84


27. Schutt RK, Seidman LJ, Keshavan M. Social Neuroscience Brain, Mind, and Society. United Kingdom, UK: Harvard Univ Pr; 2015


