

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT AND VALIDATION OF A QUESTIONNAIRE
TO ASSESS ADOLESCENTS' KNOWLEDGE, ATTITUDE,
NORMS AND MEDIA LITERACY RELATED TO SUGAR-
SWEETENED BEVERAGES**

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ABSTRACT

The high consumption of sugar-sweetened beverages (SSB) among adolescents has become a growing public health concern in Malaysia due to its strong association with obesity, diabetes, and other non-communicable diseases. Despite increasing awareness, there is a lack of validated assessment tools that comprehensively capture the factors influencing adolescents' perceptions of SSB, particularly in the local cultural context. To bridge this gap, this study aimed to develop and validate a culturally appropriate questionnaire to assess adolescents' knowledge, attitude, norms and media literacy of SSB in Malaysia, focusing on four key domains: knowledge, attitude, norms, and media literacy. The development of the questionnaire was motivated by the absence of a validated, knowledge, attitude, norms and media literacy-based tool suitable for local adolescents, despite the growing concern over rising SSB consumption and childhood obesity in the country. The validation process involved three main phases: content validity, face validity, and test-retest reliability. For content validity, nine experts evaluated the relevance of each item using the Item-Level Content Validity Index (I-CVI) and Scale-Level Content Validity Index (S-CVI/Ave), with results showing excellent overall agreement (S-CVI/Ave = 0.91). Face validity was conducted among 10 secondary school students, and the clarity and comprehensibility of items were confirmed with I-FVI/Ave scores of 0.91 and 0.90, respectively. Test-retest reliability was assessed among 134 students using Cronbach's alpha, Cohen's Kappa, and Intraclass Correlation Coefficient (ICC), revealing moderate reliability across all domains. While the instrument demonstrated acceptable validity and practical usability, the internal consistency of some domains indicated a need for refinement in future applications. This newly developed questionnaire offers a reliable and culturally relevant tool for evaluating adolescents' knowledge, attitude, norms and media literacy of SSB and may support future interventions, public health research, and education programs targeting dietary behaviour in Malaysian youth.

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

The rise of sugar-sweetened beverage (SSB) consumption is an early sign of progressive habitual diet. Meta-analyses have shown a global prevalence of childhood obesity of 8.5% from the overall population under age 18 (Zhang et al., 2024). In Malaysia, particularly in Selangor, adolescents' prevalence of overweight was 16.6% and obesity was 18.0% (IPH, 2022). The data highlight the urgency of needing an effective intervention on targeting dietary behaviour among school children.

SSB is defined by drinks that have been added with sugars, including soft drinks, fruit drinks, sweetened teas and energy drinks. In Switzerland, a stricter definition is established called SB-NEW. SB-NEW encompasses a wide range of types of SSB, not limited to added sugar. Free sugars, low-calorie sweeteners and plant-based milk substitutes are all categorised in the SB-NEW (Sousa et al., 2020). SSB contribute to additional empty calories that can increase daily calorie intake. Excessive calorie intake can lead to various health consequences, including weight gain, increased risk of Type 2 diabetes, dental caries, nutritional deficiencies and cardiovascular issues (Keller & Bucher, 2015).

Knowledge, attitude, norms and media literacy of SSB has an influence towards the consumption of SSB (Roesler et al., 2021). The lack of a measuring tool for the knowledge, attitude, norms and media literacy of SSB among adolescents addresses the need to develop a suitable tool. By measuring the data knowledge, attitude, norms and media literacy of SSB among secondary school children, trends of SSB consumption can be predicted. Thus, the study focuses on developing a questionnaire that can measure the knowledge, attitude, norms and media literacy of SSB among adolescents suitable to be used in the Malaysian setting.