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Letter to Editor

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Papaya (*Carica papaya*) leaf smoking in Nigeria: A closer look at a newly recognised substance useGareth Davey 

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I applaud Adekeye AP and the journal for publishing ‘Smoking of *Carica papaya* in Nigeria: The rationale, the public health effects and policies for intervention’. It is important to draw attention to newly recognised uses of substances which might alter perception, mood, and/or behaviour. Contrary to commonly used drugs, information about papaya [*Carica (C.) papaya*] leaf smoking is scarce, positioning the article[1] as original and timely.

Nevertheless, several important issues require clarification through empirical investigation. The author’s arguments are based on the assumption that *C. papaya* is a psychoactive substance because a sizeable number of university students smoke its dried leaves for feelings of euphoria and pleasure. I counterargue that young people might misperceive the effects of smoking. Whether *C. papaya* contains a psychoactive substance that affects nervous system functioning, mental processes, and/or behaviour is currently speculative and unknown. A recent study[2] cited in the article[1] claims that ‘the smoking of *C. papaya* leaves has also been proven to have a stimulatory effect on the central nervous system similar to that experienced during *Cannabis sativa* [cannabis] use’. However, this claim was based on a report[3] of crude survey data about university students’ attitudes in which only half of the respondents agreed that papaya leaf could be used as a psychoactive substance; even fewer respondents agreed that it produces the same effects as cannabis. Therefore, I am baffled by the author’s recommendation to classify *C. papaya* as a psychoactive substance as well as the assertion that smoking it “causes a ‘dopamine rush’ in certain brain regions especially in the nucleus accumbens and this consequently results in positive reinforcement, maintaining activities that support the further use of the substance”[1].

It is not clear if smoking papaya leaf in moderate amounts is addictive or causes significant health risks, distress, or

impairment. Therefore, there is no evidence to support the author’s recommendation[1] that it is classed as a substance use disorder; indeed, the author seems to confuse concepts such as ‘substance’, ‘substance use’, ‘substance use disorder’, and ‘psychiatric disorder’. Any recommendations for the prevention, control, and treatment of substance use need to be well-thought-out and comprehensive because treating people who have substance abuse or substance-related disorders is difficult and must address multiple areas and needs and complicated pathways from drug use to abuse to dependence.

Studies on papaya leaf smoking and on its pharmacology, prevalence, risk factors, and health impact are urgently needed. Thinking about combatting the misuse of a fruit that is ubiquitous in tropical and subtropical regions is perplexing, but also vital as the smoking practice could easily, cheaply, and legally spread and increase in prevalence. This might be best tackled by changing social norms, customs, and contextual factors through culturally appropriate interventions[4,5]. It is clear, however, that putting ‘newly recognized uses of psychoactive substances’ at the forefront of tropical medicine and global public health is imperative for timely identification, reporting, and monitoring of emerging trends.

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The editors contacted the authors of the study by Adekeye AP and failed to obtain a response from the authors.

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