

Do 'Kafeteria Sihat' Attributes influence Customers' Post Purchase Behaviour?

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Abstract

'Kafeteria Sihat' is a government effort to create a wider choice of healthy eateries, encourage healthy eating practices thus potentially reducing the prevalence of non-communicable diseases (NCD). Past studies of healthy cafeteria programmes have only focused on measuring the customers satisfaction based on the attributes at the cafeteria and the influence of eating behaviour. This study is proposed to evaluate the impact of various 'Kafeteria Sihat' attributes on the customers post-purchase behaviour together with perceived value as the moderator as well as eating behaviour and satisfaction as mediators. Using newly developed questionnaires, the survey is expected to be conducted at the 11 public hospitals in Selangor and Putrajaya, Malaysia. The findings of this study will reveal the overall customers' acceptance of the 'Kafeteria Sihat' programme and explain the possible causal relationship between *its*' attributes and customers post-purchase behaviour. In addition, moderating and mediating effect of perceived value, eating behaviour and customer satisfaction on the causal relationship are expected to be reported. The findings will not only benefit 'Kafeteria Sihat' customers and operators but also for the Ministry of Health in making improvements to the 'Kafeteria Sihat' initiative.

Keywords:

Healthy Cafeteria; Kafeteria Sihat; Perceived Value; Eating Behaviour; Satisfaction; Post-Purchase Behaviour.

1 Introduction

Unhealthy food consumption has become an issue of concern not only in commercial restaurants but in hospital cafeterias as well (Harel, Goldberg, Harel, Cram, & Bell, 2015). Several hospitals in Australia, Canada and the US have received criticism for selling unhealthy food which does not reflect the image of a healthcare institution that sells and promote healthy food (Bell et al., 2013; Cram, Nallamothu, Fendrick, & Saint, 2002; Dunfield, 2014; Freedhoff & Stevenson, 2008; Harel et al., 2015) as well as allowing fast-food franchises to open outlets inside the hospital premises (Auer, 2006; Sahud, Binns, Meadow, & Tanz, 2006). More worrying is the fact that unhealthy food consumption has contributed to the rise of non-communicable diseases (NCD) such as obesity, diabetes, and hypertension (Azizan, Sapawi, & Kuan, 2016; Burgoine, Forouhi, Griffin, Wareham, & Monsivais, 2014; Harel et al., 2015; Ministry of Health, 2010). It is often contended that those who frequently consume meals away from home were more susceptible to NCDs (Cram et al., 2002; Sahud et al., 2006; Tarro et al., 2017; Wu & Sturm, 2014). The World Health Organization (2015) reported that in 2014, the global statistics showed more than 1.9 billion adults, above the age of 18 years old, were overweight. Out of the 1.9 billion adults, over 600 million were obese.

One of the many steps taken by many world government health agencies to combat NCD is through the implementation of the healthy cafeteria initiatives as intervention programmes. These programmes such as Eat Smart! (Dawson, 2003; Dawson, Dwyer, Evers, & Sheeshka, 2006), Healthy Hospital Food Initiative (Moran, Krepp, Johnson Curtis, & Lederer, 2016), Choose Healthy Now! (Donohoe Mather & McGurk, 2014), Healthy Picks (Wojcicki, 2013) and Gold For Life (Bell et al., 2013) aims to promote healthy and safe eating practices amongst healthcare workers and public by offering a wide varieties of healthy staple foods, fresh fruits, low-calorie snacks and limiting the options for comfort foods. Various strategies were used to promote and increase the awareness of the healthy eating at the hospital cafeterias through 3-coloured food labelling, stealth marketing, special price promotions, loyalty programs and food shelve manipulations (Chan, Kwortnik, & Wansink, 2017; Lindeman, Fougerson, Vaughn, Thaman, & Cummings, 2016; Patsch, Smith, Liebert, Behrens, & Charles, 2016; Thorndike, Riis, & Levy, 2016; Thorndike, Riis, Sonnenberg, & Levy, 2014; van Kleef, Otten, & van Trijp, 2012).

While being essential for the hospital food premises to sell the healthy food as well as promoting healthy eating practices, the catering operators and the government agencies should not neglect the importance of maintaining the customers' satisfaction (Haugaard, Stancu, Brockhoff, Thorsdottir, & Lähteenmäki, 2016a). Catering operators want customers to repeatedly buy their service offerings (Kim, Ng, & Kim, 2009) and remain loyal (Ladhari, Brun, & Morales, 2008). Meanwhile, government agencies wish to promote healthy eating practices through the healthy cafeteria initiative as an effort to reduce the number of NCD cases which can potentially lower the treatment costs in the healthcare system. Thus, offering healthy food choices not only encourages customers to develop good eating practices but also satisfy the needs and wants of

customers while potentially encouraging repurchases, positive dispersion of information and sustaining profit (Dawson et al., 2006; Gursoy, McCleary, & Lepsito, 2003; Kimathi, 2008).

1.1 Issues in the contextual study setting

Similar to other countries, Malaysia is also facing the problem of high NCD prevalence (Ministry of Health, 2010, 2016a; Mustapha et al., 2014). More than 70% of deaths occurring at public hospitals are due to NCD thus shows that this is a serious problem despite the government spending billions towards healthcare yet fatality rates are still at an alarming rate (Ministry of Health, 2016b). As an effort to encourage healthy eating practices and due to the lack of healthy food choices at food premises, the Ministry of Health, Malaysia launched its version of the healthy cafeteria programme known as the '*Kafeteria Sihat*' (Ministry of Health, 2016a). This initiative is one of the lifestyles intervention programmes for that community and is part of the first National Strategic Plan for Non-Communicable Diseases under the 12th National Key Economic Area launched by the Prime Minister of Malaysia in 2009 (Ministry of Health, 2010, 2016a). It was later integrated into the third National Plan of Action For Nutrition Malaysia NPANM in which '*Kafeteria Sihat*' is planned to be implemented on a larger scale especially in schools, universities, army camps, prisons, government link companies as well as in the private sector (Ministry of Health, 2016b).

Overall, this initiative aims to improve the food quality and promote healthy eating practices at cafeteria premises in the public hospitals throughout Malaysia (Ministry of Health, 2015, 2016a). The concept of a '*Kafeteria Sihat*' is a 'One -Stop Centre' that govern attributes of nutritious, clean and safe food, healthy services and staffs as well as operational certification. In this sense, food served does not contain an excessive amount of salt, sugar, oil, colouring, artificial flavouring with approved beneficial ingredients (Ministry of Health, 2016a). The conducive service environment is emphasized to educate and promote healthy eating practice through participative and hands-on approach.

In commercial foodservice setting, food and service quality attributes are the dominant factors that influence customers' decision of patronizing a particular restaurant compare to the ambiance, location, accessibility and entertainment (Edwards & Meiselman, 2005; MacLaurin & MacLaurin, 2000; Parasuraman & Grewal, 2000). These traits would often determine customers post-purchase (Sulek & Hensley, 2004). Customers perceived value towards food, service quality, and other elements influence customer's decision on what and where to eat (Ha & Jang, 2010; Teng & Chang, 2013). Scholars often highlighted that level of satisfaction acts as an antecedent to post-purchase behaviour which would often be either repurchase intention, word of mouth intention or total rejection (Adebanjo, 2001; Han & Ryu, 2009; Iglesias & Guillén, 2004; Jones & Suh, 2000; Kandampully & Suhartanto, 2000; Oliver, 1999; Pratten, 2004; Sun & Kim, 2013; Susskind, 2002; Tian-Cole, Crompton, & Willson, 2002) .

In dealing with this proposed study that deals with the characteristics of '*Kafeteria Sihat*' which is associated with food low in sugar, salt, fat, restricted choice of flavouring ingredients, self-service and the different service scenario few questions could be raised. Does the scenario at normal restaurants similarly occur in the '*Kafeteria Sihat*' setting? How does food quality and services influence the customers' decision to eat in the context of '*Kafeteria Sihat*' setting? Does perceived value towards '*Kafeteria Sihat*' attributes influence customers' decision to eat there? Will satisfaction level at '*Kafeteria Sihat*' encourage positive word-of-mouth effect, repurchase or cause rejection amongst customers? This knowledge is yet to be known in the '*Kafeteria Sihat*' setting. Based on the existing literature, past studies looking at the healthy hospital cafeteria only measured the level of satisfaction from the respondents base on elements present at the cafeteria (Dawson et al., 2006; Donohoe Mather & McGurk, 2014; Kimathi, Gregoire, Dowling, & Stone, 2009; Lee & Park, 2015; Lindeman et al., 2016; Roberto, Larsen, Agnew, Baik, & Brownell, 2010; Thorndike et al., 2014), and the influence of eating behaviour (Haugaard et al., 2016a; Haugaard, Stancu, Brockhoff, Thorsdottir, & Lähteenmäki, 2016b).

However, there has yet been any study done on a holistic level in evaluating how customers perceived value might have a moderating influence between healthy cafeteria attributes, eating behaviour, satisfaction and post-purchase behaviour of healthy cafeteria which can give a better indication of how the healthy cafeteria programme has been performing in terms of overall acceptance and customer retention. To date, there has only been one study published relating to the '*Kafeteria Sihat*' programme in Sabah by Azizan et al. (2016) which focused on customer's nutrition knowledge and perception. From the issue arises relating the government commitment in implementing the '*Kafeteria Sihat*' concept on a broader scale in order to cultivate the culture of healthy eating amongst the general public which will in turn reduce the prevalence of NCDs, this creates the opportunity to explore its significance in food service industry primarily through the assessment of the various factors which could have either a direct, moderating or mediating effect towards post-purchase behaviour. Furthermore, the lack of knowledge and gaps from previous studies relating to healthy cafeteria programs warrants for an empirical investigation.

Having discussed the foregoing issues, the primary objective study is to investigate the influence of '*Kafeteria Sihat*' attributes, the moderating effect of perceived value as well as mediating effect of customers eat behaviour and satisfaction towards post-purchase behaviour. This main objective is further supported with immediate objectives which is to:

- RO1: Investigate the influence of '*Kafeteria Sihat*' attributes towards customer post-purchase behaviour.
- RO2: Examine the influence of '*Kafeteria Sihat*' attributes towards customer eating behaviour.
- RO3: Evaluate the influence of '*Kafeteria Sihat*' attributes towards satisfaction.
- RO4: Assess the influence of eating behaviour towards customer satisfaction.

- RO5: Evaluate the influence of customer satisfaction towards post-purchase behaviour.
- RO6: Assess the moderating effect of perceived value on the relationship between '*Kafeteria Sihat*' attributes and customer eating behaviour.
- RO7: Assess the mediating effect of eating behaviour on the relationship between '*Kafeteria Sihat*' attributes towards customer satisfaction.
- RO8: Examine the mediating effect of customer satisfaction on the relationship between eating behaviour and post-purchase behaviour

2 Literature Review

2.1 Rational of Having '*Kafeteria Sihat*' Initiative in Malaysian Public Hospital

According to the Malaysian National Health and Morbidity Survey 2015, it is reported that the prevalence of obesity has reached 17.7% which equates to approximately 3.3 million; Type 2 diabetes at 17.5% which equates to approximately 3.5 million; high blood cholesterol at 47.7% which equates to 9.6 million; and hypertension at 30%, which equates to 6.1 million adult Malaysians (Ministry of Health, 2015).

As an effort to diversify the options for healthy food premises in the foodservice market and encourage healthy food consumption which could potentially reduce the high prevalence of NCD, the Malaysian Ministry of Health launched its own version of the healthy cafeteria programme known as '*Kafeteria Sihat*' in 2012 (Ministry of Health, 2015, 2016a). This initiative is one of the lifestyles intervention programs for that community, and part of the first National Strategic Plan for Non-Communicable Diseases under the 12th National Key Economic Area launched by the Prime Minister of Malaysia in 2009 (Ministry of Health, 2010, 2016a). Later on, the '*Kafeteria Sihat*' was integrated into the third National Plan of Action For Nutrition Malaysia NPANM (Ministry of Health, 2016b). The NPANM III has a total of 4 indicators in which '*Kafeteria Sihat*' has been integrated into the ecosystem under the second indicator: Promoting Healthy Eating and Active Living and fourth indicator Preventing and Controlling Obesity and Other Diet-related Non-Communicable Diseases (NCD).

'*Kafeteria Sihat*' is defined as a premise that serves and sells food and beverages which are healthy, clean and safe and complies with good hygienic practices (Ministry of Health, 2016a). It also serves as a medium to promote healthy eating practices, encourage the cooperation between the Ministry of Health and cafeteria operators in promoting healthy and safe food as well as training and educating cafeteria operators on healthy food preparation techniques. Generally, a '*Kafeteria Sihat*' would provide healthy food and beverage choices on the menu, being compliance with food quality and safety standards established by the Ministry of Health.

2.2 Criteria for '*Kafeteria Sihat*' certification

A cafeteria must meet the criteria set by the Ministry of Health before they can be awarded the '*Kafeteria Sihat*' certification (Ministry of Health, 2016a). Summary of the

criteria required are compiled in Table 1, Table 2 and Table 3 respectively. Staff working at the 'Kafeteria Sihat' are subjected to comply with the regulations stated under the Food Act 1983 (Ministry of Health, 2012).

Table 1: Serving Criteria for 'Kafeteria Sihat'

Food/Beverage Categories	Serving Choices	Suggested Serving
Rice, noodle, bread, cereal, starches	Roti, capati, tosei Cereal or oat meal Pasta, noodles White or brown rice	At least two choices from cereal group. At least one choice of high fibre (wholemeal bread, capati, brown rice, and oat). If no high fibre food at least one choice of legume base dish (e.g., dhal or chickpea)
Vegetables	Steamed, sauté soup. 'Ulam' or salad Juice Tomato-based sauce	At least three choices of vegetables not including garnishing, deep-fried vegetables, cream soup (e.g., cream of mushroom) or salad with dressing (vinaigrette, mayonnaise) Only one choice vegetable cooked in coconut milk
Fruits		At least two choices of fresh fruits. Separate condiments
Fish, chicken, egg, beef, and other proteins		Prepared using the steaming method Prepared using boiling method Prepared using grilling method 4. Adding vegetables to the dish
Nuts and legumes		At least one choice of legume base dish (e.g., dhal or chickpea)
Milk and dairy products	1.Low-fat milk 2.Skimmed milk 3.Low-fat yogurt	Beverages prepared using low-fat milk or skimmed milk.

Table 2: Discouraged and prohibited food items in 'Kafeteria Sihat'

Discouraged food	Prohibited food items
1. Iced Confectionaries	1. Picked food
2. Instant food	2.Snacks that contain colouring and flavouring
3. Canned food	3. Carbonated drinks
4. Cakes and donut	4. 3-in-1 drink mixture

Table 2: Discouraged and prohibited food items in 'Kafeteria Sihat' (Cont)

Discouraged food	Prohibited food items
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5. Cordial drinks	5. Processed food (Burger, sausages and chicken nuggets)
	6. Instant noodles
	7. Food coated in cream or sugar
	8. Alcoholic beverages
	9. Sweets

Table 3: Service Elements Present at a 'Kafeteria Sihat'

Service Elements	Staff regulations
Self-service	Typhoid immunization
Separate counters provided for condiments	Attend and complete food handlers training courses
Posters and pamphlets relating to healthy food selection	Attend and complete healthy catering practice courses
Posters and pamphlets relating to proper food handling techniques	Wear appropriate PPE throughout work
Weight and height scale	Handle food using appropriate utensils

2.3 The Relationship Between Perceived Value, Eating Behaviour, Satisfaction and Post-Purchase Behaviour in the Foodservice Setting

In the commercial foodservice setting, food quality (Chang, Suki, & Nalini, 2014; Kong & Mohd Jamil, 2014; Othman, Salehuddin, Karim, & Ghazali, 2012; Soriano, 2002; Sulek & Hensley, 2004), service elements (Chu, Southerland, & Wang, 2005; Edwards & Meiselman, 2005; MacLaurin & MacLaurin, 2000; Pratten, 2003), staff competency (Adam, Adongo, & Dayour, 2014; Clemes, Gan, & Sriwongrat, 2013; Döring & Wansink, 2016; Pratten, 2004) and certification (Alexandris, Dimitriadis, & Markata, 2002; Alonso, Gallego, & Mangin, 2005; Ha & Jang, 2010; Haghighi, Dorosti, Rahnema, & Hoseinpour, 2012; Kim, Lee, & Yoo, 2006) are common attributes known to significantly influence customers' decision to eat, satisfaction and repurchasing intention. Perceived value has been found to play a moderating role between foodservice attributes especially food and service qualities against satisfaction and repurchasing intention (Caruana, Money, & Berthon, 2000; Ryu & Han, 2010) and in a few cases plays a mediating role (Patterson & Spreng, 1997). The relationship between perceived value, satisfaction, and behavioural intentions have been theoretically and empirically justified (Gill, Byslma, & Ouschan, 2007). The theoretical justification for the relationship can be found in Ajzen and Fishbein (1980) attitude/behaviour framework, which suggests that cognition leads to affect, which in turn derives behavioural outcomes.

Eating behaviour characteristics can potentially be used to predict meal satisfaction at worksite cafeterias as reported by Haugaard et al. (2016a). Higher disinhibition and lower hunger scores resulted in high satisfaction ratings for food quality and food variety. Customers with higher disinhibition would prefer a wide variety of food to choose from compared to those with high restraint score who are less concern about the amount of dish offer and would prefer fewer food offerings (Haugaard et al., 2016b).

Satisfaction functions as an antecedent to post-purchase behaviour (Han & Ryu, 2009; Jones & Suh, 2000; Kandampully & Suhartanto, 2000; Oliver, 1999; Sun & Kim, 2013; Tian-Cole et al., 2002). It is particularly believed to have a significant influence on post-purchase behaviour (Anderson & Sullivan, 1993; Cronin & Taylor, 1992; Keaveney, 1995; Oliver, 1980; Oliver & Swan, 1989) in which positive satisfaction of services and products will encourage re-patronization as well as positive word-of-mouth effects (Han & Ryu, 2009; Jones & Suh, 2000; Kandampully & Suhartanto, 2000; Oliver, 1999; Sun & Kim, 2013; Tian-Cole et al., 2002). Meanwhile, negative satisfaction would lead to customer complaints (Oliver, 1980), rejecting the product outright thus customers would like less likely repurchase at that restaurant nor would they recommend to others (Adebanjo, 2001; Susskind, 2002; Pratten;2004 Iglesias and Guillén;2004).

2.4 Conceptual Framework

Having identified the variables in the reviews of the relevant literature, the variable of interest (dependent) in this study is customers post-purchase behaviour and the predictor variable (independent) are the four 'Kafeteria Sehat' attributes consisting of Food Quality, Service Elements, Staff Competency, and Certification. Perceived value is predicted to function as the moderating variable while eating behaviour and satisfaction are predicted to function as mediating variables. Therefore, the proposed framework is illustrated in Figure 1.

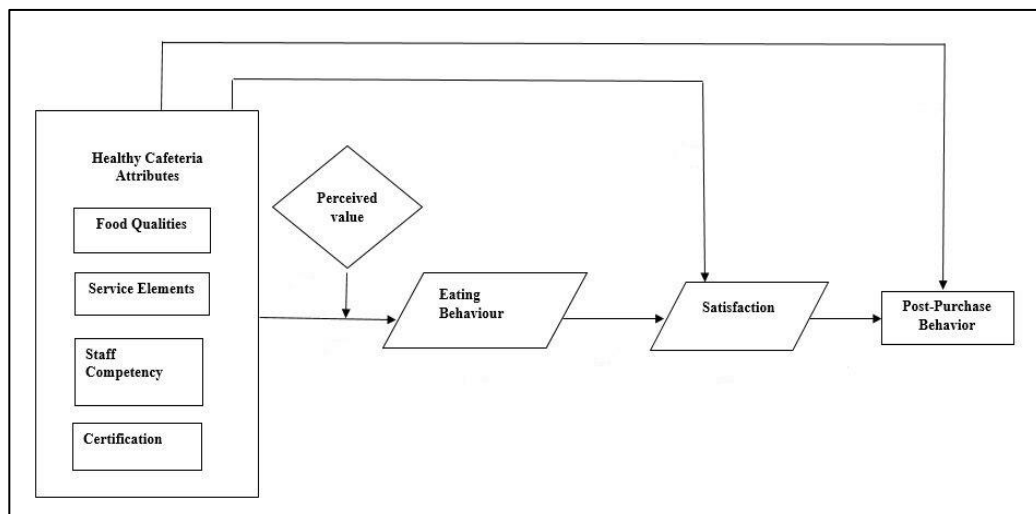


Figure 1: Conceptual Framework

3 Methodology

3.1 Study Design

This study will use a quantitative approach through a cross-sectional study involving self-administered questionnaires. As this study explicitly looks at the causal relationship between 'Kafeteria Sehat' attributes and post-purchase behaviour, the population and

the unit of analysis are among customers who patronize at '*Kafeteria Sihat*' available throughout 11 public hospitals in Selangor and Putrajaya, Malaysia. The customers who will participate in this study will consist of both hospital workers and visitors hence each response will be measured at an individual level rather than in a group.

3.2 Questionnaire Structure

The survey questionnaire is divided into seven major sections. Each section contained items addressing each construct. These items were self-developed as well as adapted from past study relating to healthy cafeteria (Azizan et al., 2016; Dawson, 2003; Kimathi, 2008), eating behaviour (Cappelleri et al., 2009; Tholin, Rasmussen, Tynelius, & Karlsson, 2005) and restaurant related studies (Ryu & Han, 2010; Ryu, Han, & Jang, 2010; Ryu, Han, & Kim, 2008). Section A comprises of respondent's demographic profile such as age, gender, education level, the frequency of visiting hospital and occupation. Section B comprises of items relating to the independent variables which focus on four attributes of '*Kafeteria Sihat*.' Section C consists of items to measure the perceived value as the sole moderating variable. Section D comprises items to evaluate customers' eating behaviour as the first mediating variable while section D measure customer satisfaction as the second mediating variable.

Meanwhile, items in section F measures the customers' post-purchase behaviour as the dependent variable. The five-point Likert scale is used in measuring items in all construct from section B to F ranging from 1= strongly disagree to 5= strongly agree. Lastly, Section G comprises of 4 subjective questions relating to attributes that influence the re-patronizing decision at '*Kafeteria Sihat*,' attributes that bring the highest value to '*Kafeteria Sihat*,' attributes that patrons are most satisfied at '*Kafeteria Sihat*' and the potential of commercializing '*Kafeteria Sihat*.' Considering the differences in respondent profiles, questions used will be simple, understandable with the least reading and writing. This enables the respondents should to read an item quickly and select an answer without any difficulty. In addition, all items are formulated as clearly as possible with simple wording and language to reduce any possible ambiguities.

3.3 Plan for Data Analysis

The planned statistical analyses to be used in this study ranges from the frequency, the internal consistency, descriptive, an exploratory factor analysis (EFA), the confirmatory factor analysis (CFA) and the Structural Equation Modelling (SEM). All these tests applied will provide information that describes a set of factors in a situation or established the goodness of measures and to fulfill the objectives of the study.

4 Contribution and Conclusion

As the study is still under investigation thus from the academic perspective, it is hoped that the result substantially expands the body of knowledge relating to consumer behaviour based research on healthy cafeteria programs specifically '*Kafeteria Sihat*' in Malaysian public hospitals. As past studies relating to healthy cafeteria programmes

focuses on aspects such nutrition knowledge, eating behaviour, general perception and overall satisfaction, this study has its novelty through a holistic level evaluation with the inclusion of the role of perceived value in eating decision, as well as post-purchase behaviour. It is expected that the findings from this study will inform patrons' overall acceptance of the '*Kafeteria Sihat*' programme through mean scores and written comments. It is also predicted that results will be able to explain the possible causal relationship between '*Kafeteria Sihat*' attributes and post-purchase behaviour with the presence of perceived value as the moderator as well as eating behaviour and satisfaction as mediators.

From the practical perspective, it is expected that the findings will be beneficial for not only for patrons and cafeteria operators but also the Ministry of Health in making improvements to the '*Kafeteria Sihat*' initiative. A holistic evaluation method of the '*Kafeteria Sihat*' initiative on a hospital level can potentially enable the Ministry of Health to implement the programme more effectively on a larger scale in all government offices, schools and universities as well as cafeterias in the private sector. This will increase the awareness and better knowledge of healthy eating practices amongst a larger population. Restaurants can also adapt healthy menu concepts from '*Kafeteria Sihat*' thus creating a wider choice of healthy food options. Having more choices of healthy eateries can potentially cultivate healthy eating practices amongst a larger population thus, lowering the rate of non-communicable diseases (NCD) in Malaysia in the long run.

5 Acknowledgment

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