



## Preferences of medical students regarding physical characteristics of oral solid dosage formulations in Malaysia

Sir,

Oral solid dosage forms are some of the least expensive, most popular, and convenient method for drug delivery.<sup>[1]</sup> The general appearance of oral solid dosage form is its visual identity. The overall “elegance” is essential for consumer acceptance, and have an impact on the compliance of the treatment.<sup>[2]</sup> The general appearance of oral solid dosage forms involves evaluation of attributes such as a tablet’s size, shape, color, odour, and taste. To increase the consumer acceptance and compliance of drug treatment, it is essential that the physical appearance of the formulation be matched with the

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general choice (shape, size, color, smell, and taste) of the people living in a particular geographical area.

In the present study, the first year medical students of AIMST University, Malaysia, were given a questionnaire to know their preferences regarding the physical characteristics of oral solid dosage forms. Here the selected sample population represented young multiracial, multicultural community of the entire Malaysia as AIMST University attracts students from all over Malaysia and from abroad. All the students who participated in the study were pursuing medicine and knowing their preferences and ideas about clinical pharmacy related attributes would help in designing better oral solid dosage forms for the future.

Out of the 200 medical students who participated in the study, 74 (37%) were male and 126 (63%) were females. The majority of the students were in the age group of 18 to 23 years.

The favorite 2 dimensional shape of solid dosage form as per the responses was circular (117, 58.5%) followed by oval (43, 21.5%), and the least preferred shape was triangular (4, 2%). The majority of the students 126 (63%) were of the opinion that doctor should take into consideration the shape of the tablet and patients own preference regarding the shape of the oral solid dosage form before prescribing. The rest of the students 74(37%) strongly disagreed with the same.

The majority of the students (195, 97.5%) felt that the size of the oral solid dosage form should be small enough to swallow it easily. Four (2%) students felt that the size of the tablet should be bigger and felt that bigger size would give the psychological impression of wellbeing if prescribed to the patients.

The top three colors students preferred for solid dosage forms were blue (62, 31%) followed by red (52, 26%) and green (36, 18%). The least preferred color was orange (4, 2%). One hundred and nineteen (59.5%) students were of the opinion that the color of the solid dosage form is important for compliance of the drug treatment and that the acceptability of the product is increased by making the tablet more visually elegant. The rest of the students (81, 40.5%) either disagreed or were unable to decide anything about the concerned point.

Smell is an important factor in making the solid oral dosage form more palatable and this was agreeable to 169 (84.5%) students. The remaining 31(15.5%) did not agree with the same and were not bothered about the smell of the solid dosage form. The sweet taste (88,44%) was preferred in oral solid dosage forms followed by tasteless solid oral dosage forms (80, 40%). With regard to cosmetic acceptance, 168 (84%) students felt that attractive packing makes drugs more cosmetically

acceptable and that bottles (108, 54%) were ideal for storing oral solid dosage forms as compared to strips (92, 46%).

In general, 104 (52%) students felt that if a solid oral dosage form matching the patients own physical preferences for color, shape, size, taste, and smell is prescribed would increase the patients faith in doctor and will help in improving the compliance of patient towards treatment prescribed. It was also noted that the preferences for shape, size, color, taste, and smell for oral solid dosage forms were slightly different for male and female subgroup but, but when these preferences were compared in between the groups, the differences were statistically not significant ( $P < 0.05$ ).

## CONCLUSION

Junior doctors in AIMST University, Malaysia prefer oral solid dosage formulations, which are small in size, circular in shape, blue in color, sweet in taste, and with no obnoxious smell.

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