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An Investigation on Suit Choices of Men with Muscular Body Structure

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ABSTRACT

It is necessary desired that men's suit frequently worn at working conditions and special days should be cozy and comfortable. Consequently suits are produced according to generated size charts for various body structures. However there is not any production intended for men practicing sports for body built and having muscular bodies. In order to generate size chart to meet such people, a survey has been applied to persons doing bodybuilding sports and their ideas and detecting the problems. For finding solution to these questions a special size chart was developed necessary for production of suit by measurements taken from such people. The results were compared with normal body sizes.

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KEYWORDS

Men's suit, athletic body, clothing pattern, size table

1. INTRODUCTION

The suit is one of the most important clothing groups of the classic men's clothing style. Suits mainly consist of jackets and trousers. The clothes worn by men in official places, ceremonies, feasts and invitations have become very comfortable in daily wear today. More comfortable clothes can be produced by improving the performance properties of natural and synthetic fabrics. Single row buttons, double row buttons and vests can be produced. The suit should match your body size. Otherwise, one feels uncomfortable in the garment. For this reason, a wide variety of size tables are used in the production of suits. The dimensions in these tables are drop size tables prepared by considering the circumference of the navel. The most important reason for this is the increase in the belly circumference in overweight men. Similar size problem is experienced in people with muscular body structure. Changes in body structures of people doing sports with body build intention basically manifest differences according to exercises done, nutritional status and genetic structure of body. When the muscular body is said, body shape with an inverted triangle image comes to mind, People having such body shape generally are doing sport with body built intention.

At the end of the exercise, muscle tissues develop and grow in volume. Shoulder expands, especially with the development of chest muscles and upper arm muscles. With the melting of belly fat, abdominal muscles develop and waist circumference decreases. Accordingly, man who does not do any physical activity owns a very different body structure than the man who builds body on a regular basis.

The volume of growth and shrinkage in certain parts of the bodies of people, especially with high muscle density, doing sports for bodybuilding brought also the problem of fitting the use of suits to the body. For this reason, it is not correct to produce clothes with normal patterns for people with high muscular bodies.

With this study, the expectations of the people who do sports for muscle building were determined by a questionnaire study and their body measurements were taken. The measurements obtained for the production of their suits were compared and evaluated with those of the normal body sizes.

2. LITERATURE REVIEW

Dongshengve Qing, studied the evaluation of the degree of pressure of the suit on the bodies of various mannequins.

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Therefore, they obtained some data for the comfort analysis of the garment (1).

Muratoğlu and Kılınç in a study conducted in 2004, analyzed men body types, standard sizes used in men clothes, body sizes, classification of men clothes and materials needed in men's jacket and trousers (2).

In line with Turkish Standard Institute body sizes for Turkish men, Sezer in his study in 2006, has tried classic men shirt patterns 46, 48, 50 and 52 sized classical men shirts prepared by Muller pattern system on 46, 48, 50 and 52 sized sportsmen typed male students and parallel to his data, he has developed classic men shirt patterns (3).

Mori and Matsudaria examined the warp yarn density was changed for men's suit fabrics and the effect of weave density on fabric handle, heat-water transfer property, appearance of clothes, wrinkle resistance, and color brightnessare examined. The total hand value (THV) showed the highest at similar density of warp and weft yarn. The total appearance value (TAV) decreased when warp and weft yarn density was smaller. Wrinkle resistance was high in the condition of the maximum warp and weft yarn density. This paper contributes to the development of a fundamental database of designing ideal fabrics (4).

Kinetic performance evaluation of suit jacket was examined by Kanai via measuring the clothing pressure. Subjects wearing three suitjacket of different size performed three different exercises in volving therotation of the upper limbs. The clothing pressure was measured by theair pack sensor and the partial compression feeling and the constrained feeling were evaluated by subjects(5).

Öndoğan, conducted a study in 2007 about the use of simulation systems on the most important stages of production as garment design, body sizing and marketing (6).

Young-Hee and Seung-Hee diagnosed the differences of preference about demand performance with design of men's suit according to demographic characteristic and figured out the needs of adult men consumers. This study is a survey research in order to collect data, a questionnaire was used. To analyze the collected data, fact analysis, $\chi 2$, ANOVA, Duncan's multiple comparisons and the rest were carried out with using SPSS 14.0. Result of this study could get as following. According to silhouette and color, there was a difference to age, attainments in scholarship and preference according to job. Also young people preferred fitted-silhouette and in occasion of color, all of them preferred best black. It was no difference according to demographic characteristic in preferring pattern but preferred best solid on the whole. Demand performance of men's suit appeared by five main causes of design, practicality, comfort, appearance appropriateness, another person awareness and functional materials. (7).

Günay, conducted a study in 2012 about searching the historical process of men sports jackets, examining the men body types and in line of his research he formed new men sport jacket patterns(8).

In his article written in 2015, Öngen presented the men's costumes in the Istanbul Textile Costume and Fashion Research Association collection and the European fashion effects seen in the clothes with visual data, in order to reflect the change in the men's fashion concept in the first years of the Republic and the change in the men's fashion concept in this period (9).

In his study conducted in 2015, Erkılıç examined the relationship between morphological variables and the anaerobic performance values obtained from the upper extremity in young male athletes studying in School of Physical Education and Sports (10).

Ünal and Şamlı examined the size numbering system of suits in their work in 2018. Various brands of suits were researched and the drop sizes applied by these brands and the body types that are the target audience of these body sizes were evaluated [11].

3. SIZE NUMBERS IN SUITS

Ready-to-wear production requires mass production. However, people's body sizes and proportions differ unlimitedly, not only in the same country but also from country to country. For this reason, standardization of body sizes is extremely important in the production of ready-made clothing. It is not possible to go to standardization in all body sizes. For this, some basic measures were selected and standardization was made on these measures. In men's clothing, these dimensions may be based on the type of clothing; chest circumference, waist circumference or collar circumference. Chest size is taken into account for size numbering in men's suits and jackets. Size number in men's suits and jackets is calculated as half of the chest circumference at 4 cm intervals (2).

The size numbering system of suits, which have an important place in men's clothing, is different from other clothing. The drop system that specifies the width of the core zone has been developed. Suits are commonly available are presented in 4, 6 and 8 drops. Intermediate drop sizes, such as 7, can also be seen in Italian cut suits. Applications and naming vary according to the companies. Drop numbers, defined as 4, 6 and 8, are obtained by finding the difference of the values of the chest and waist measurements in inches (1inch = 2.54 cm) (11).

4. MATERIAL AND METHOD

4.1 Material

The material of the research consisted of 188 male sportsmen living in Izmir and who regularly exercise in order to improve their body muscles, between the ages of 19-39. In order to reach these people, various sports complexes were determined and a survey was conducted with the permission of these places.

The survey study was composed of 3 groups as personal information, physical information and purchasing behavior. Personal information section includes the person's marital status, profession, monthly earnings, age, and how many years he has been doing sports for bodybuilding purposes. Physical information section contains the person's upper body number and lower body number measurements. Finally, in the purchasing behavior section,it was asked the preferred clothing style, in which order of priority when purchasing the clothing, whether it was able to find clothes according to the appro(1 Euro=6.666 TL) spent on the suit.

In the continuation of the survey, body measurements used in the production of suits were taken from the sportspersons and a size table was prepared for these people.

4.2. Method

First of all, a survey was conducted to determine the characteristics and expectations of people interested in bodybuilding sports. The questionnaire was created from closed and open-ended questions. Questionnaire questions were first asked to individuals, and then the necessary body measurements were taken for the production of suits.

After evaluating the questionnaire questions, the measurement table used by a company that produces a high quality suit and markets it to a large audience, and the data of the measurement table obtained as a result of the survey were evaluated statistically.

5. RESULTS AND DISCUSSION

It is required to spend time and effort in a serious sense to this sport. For this reason, considering the survey data consisting of multiple choice and one open-ended 11questions replied by young and bachelor students who are interested in this sport, certain issues were determined on the measures taken and studied people at the evaluation of this questionnaire. 162 students, 4 represents, 3 sales consultants, 3 academicians, 1 lawyer, 1 doctor, 1 instructor, 1 chemist and 12 coaches participated in the survey.Data obtained from questionnaire was evaluated with graphics.

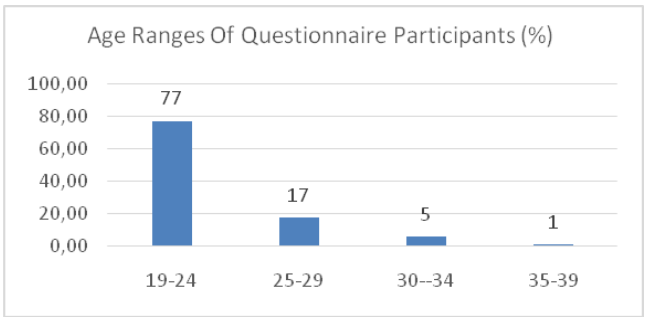

Figure 1. Age ranges of questionnaire participants

77 % of questionnaire participants were young men between 19-24 age ranges. As the age increases number of people doing sports in this field was decreased.

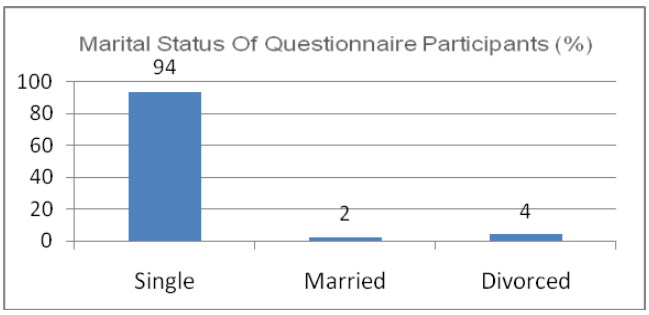

Figure 2. Marital status of questionnaire participants

94 % of people interested in bodybuilding sports were single men.This acquired results shows the proof of single young men wanted to look muscular.

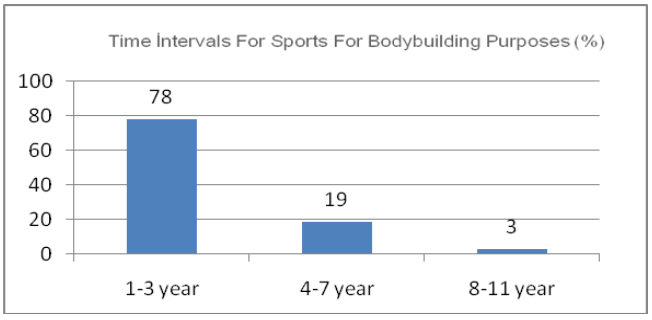

Figure 3. Time intervals for sports for bodybuilding purposes

78% of those interested in bodybuilding have been interested in this sport for 1-3 years. This ratio has decreased over the years.

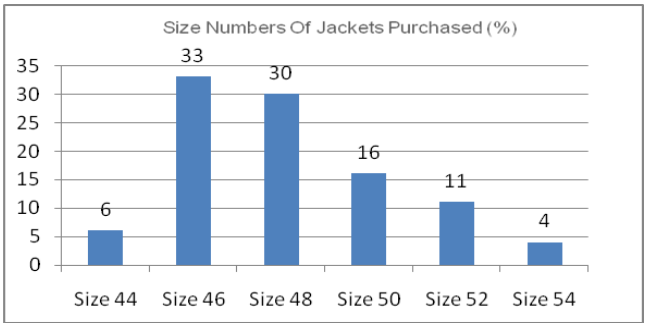

Figure 4. Size numbers of jackets purchased

It was determined that in the ratio of 33% to 30%, the sportsmen wore 46 and 48 size jackets. As the body number increases, this ratio was decreased.

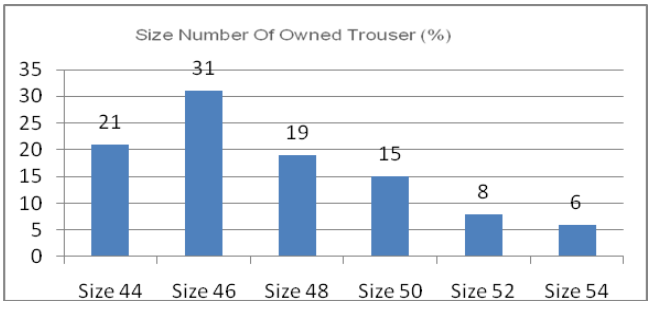

Figure 5. Size number of owned trouser

31% of the sportsmen wear 46 size pants. The ratio decreased with the size of the trousers increased as with the size of the jacket.

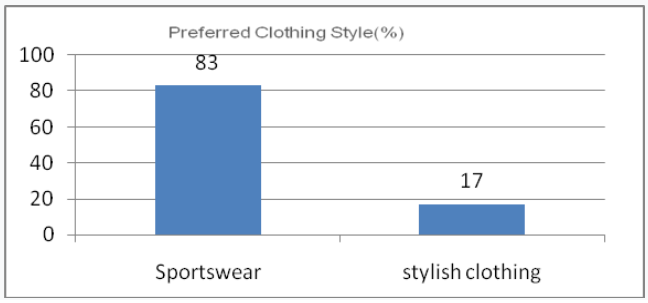

Figure 6. Preferred clothing style

When the clothing styles of the people who do regular sports are evaluated, 83% of them prefer sports and 17% prefer stylish clothing.

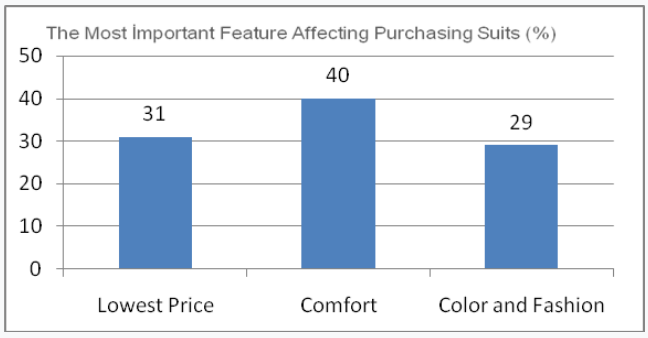

Figure 7. The most important feature affecting purchasing suits

In purchasing suits, 40% of the participants stated that they attached importance to the comfort of the garment first. While it is important for 31% to be affordable, 29% prioritize its color and fashion appeal.Comfort comes first as it is seen from the figures

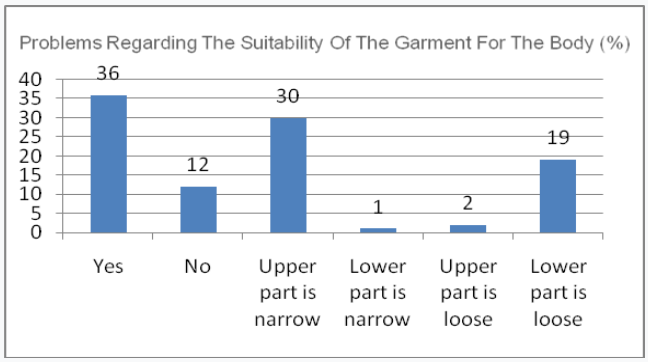

Figure 8. Problems regarding the suitability of the garment for the body

While 36% of the sportsmen can find clothes suitable for their size, 12% stated that they could not find it. An important rate such as 30% stated that they are disturbed by the narrowness of the upper body and 19% of them are disturbed by the width of the lower body.

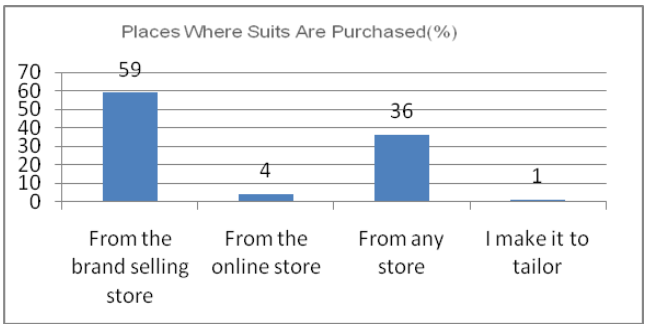

Figure 9. Places where suits are purchased

59% of respondents prefer stores selling brands to buy suits; 36% stated that they purchased from any store.

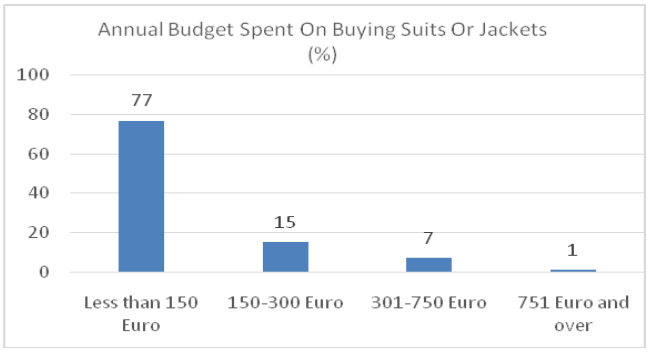

Figure 10. Annual budget spent on buying suits or jackets

77% of the respondents stated that they spend less than 1000 TL per year for suits, 15% spend 1000-2000 TL and 7% spend 2000-5000 TL.

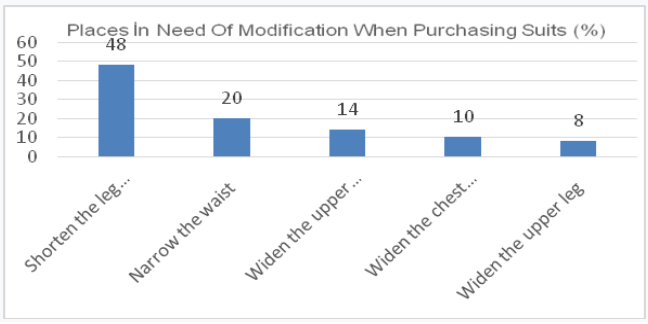

Figure 11. Places in need of modification when purchasing suits

Whether the survey respondents need modification at the end of the purchase consists of different rates. 48% of the participants stated that they needed to shorten the leg length, 20% to narrow the waist, 14% to widen the upper arm, 10% to widen the chest circumference and 8% to widen the upper leg.

6. CONCLUSION AND SUGGESTIONS

The main purpose in muscle building is to look fitter and more attractive. However, doing and maintaining this sport requires a great deal of effort. The most important reason of this situation is due to serious time and heavy nutrition criteria required to spend for this sport. Nutrition taken

before and after this sport has great importance for body building formation. Men who have difficulty in making this sport a lifestyle leave this sport in time.

As seen in Figures 4 and 5, it has been observed that men with very high body mass index are not interested in this sport. The ratio of the participant has decreased with the size of the pants has increased as with the size of the jacket.

As seen in Figure 6 most of the participants prefer sports wear in daily life since they do sports intensely. For them, suit is the garment to be preferred on special days.

However high ratio of young people at survey participants become effective in that affordability and fashion appeal of the suit was also high so that cannot be ignored.

As seen in Figure 8 the young people, intensely uses arm, chest, abdomen and leg muscles. As a result upper arm becomes thicker and chest muscles expand. Abdomen fat melts and flat abdomen with muscle is formed. Fat ratio in leg also decreases and muscular structure is also formed.

As seen in Figure 9 the suit even not preferred in daily life is preferred in case of need. For such cases the ratio of brand choice was found higher which shows that young people want to look better.

As seen inFigure 10 is the majority of the participants were students, it was found that they did not spend a lot of money on the suit. However, most of the respondents stated that they rarely need suits because they prefer sportswear. When necessary, the people who wore the existing suit dresses stated that they were not very comfortable in their old suits, and even needed renovation. However, the renovation of the suit is often impossible and the athletes said that they had to buy new suits.

In the individuals who focus on lower bodybuilding, the upper body comes in harmony with the body size they choose, while it is observed that there is an incompatibility between the waist of the pants and the leg part due to the muscle volume on the legs.

The measurements obtained from the people who participated in the survey with the measurements used by a brand producing a classic suit and used as normal body measurements are shown in Table 1 below.

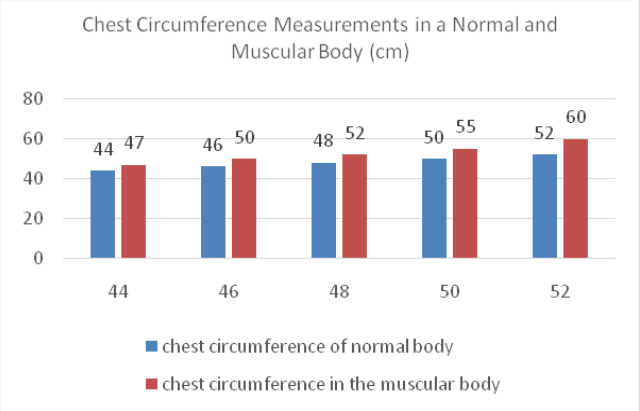

Figure 12. Chest circumference measurements in normal and muscular body

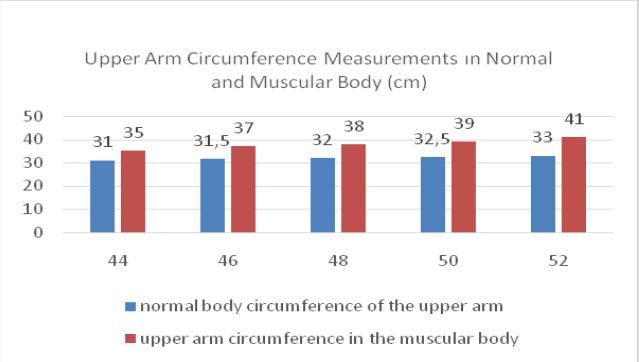

Figure 13. Upper arm circumference measurements in normal and muscular body

One of the first goals of muscular athletes is to develop their arm muscles. As seen in Figures 12 and 13, there was a regular increase in chest and upper arm circumference. Subsequently, the aim is to turn all fat tissues into muscle. It is possible with a tight body, muscular arms, muscular chest, belly and legs.

Table 1. Measurement table obtained from normal body and survey participants (12)

	Normal Body Measurements					**Measurements Obtained From The People Who Participated In The Survey**				
Sizes	**44**	**46**	**48**	**50**	**52**	**44**	**46**	**48**	**50**	**52**
Chest Width	44	46	48	50	52	47	50	52	55	60
Waist Width	40	42	44	46	48	40	42	43	45	47
Hip Width	46	48	50	52	54	46	47	48	50	53
Arm Length	62	63	64	65	66	61	62	64	66	68
Upper Arm Circumference	31	31,5	32	32,5	33	35	37	38	39	41
Side Length for Trousers	100	102	104	106	108	100	104	107	110	112
Inner Leg Length	78	80	81	82	83	78	80	82	84	86

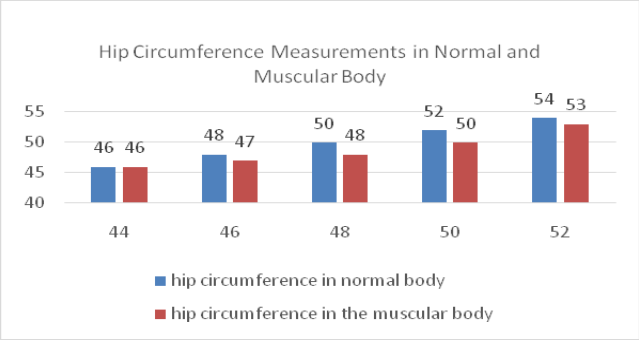

Figure 14. Hip circumference measurements in normal and muscular body

With muscle work, a regular tightening occurs around the hip and the size becomes smaller.Due to the muscle activity, a regular tightening occurs around the hip and the body size becomes smaller.Considering the result of the study; it has been determined that the basis of the problems experienced by men doing bodybuilding was caused by body parts with high muscle density. Incompatibility occurs when one of the same size jackets and trousers fits the body, while the other is slack or appear as deviation at incompatible areas such as in waist, chest and height at the person's normal size trousers or jacket. As a result, bodybuilding men experience a fit problem when they buy suits made with standard patterns. As a solution to this, it was concluded that a suit pattern with new measures should be developed in line with the data obtained as a result of the study.

Muscular people find it difficult to find a suit that fits nicely on their body among the sizes available on the market. Such people approve the situation which knitted garments are flexible and make the details of the body clearer. For this reason, the biggest problem is experienced in the clothes produced from woven fabrics. Therefore, taking into account the muscular people, a different size table and patterns worked with these sizes are needed for shirt and suit production. This research is important in terms of determining the suit problems of people who do sports for muscle building purposes and speeding up the clothing pattern studies in this field to raise awareness about this issue before anything else.

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