

Perspectives of youths and adults improve the care of hospitalized adolescents in Spain¹

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Perspectives of youths and adults to improve the care of hospitalized adolescents in Spain

Abstract:

Purpose: To determine and compare the preferences and priorities of youths and adults about the best ways to improve hospitals that would have an impact on the quality of life of hospitalized adolescents.

Method: Participants in this study were 364 adolescents between 14 and 17 years of age (96 hospitalized) and 148 adults (96 parents of patients and 52 health professionals). All the participants completed a questionnaire about their preferences and priorities with regard to hospitalization.

Results: A high degree of agreement among the youths and the adults was observed, especially in the importance assigned to agreeableness of clinical staff to improve adolescents' experience of hospitalization. Some discrepancies were also observed. The youths granted more importance to issues related to filling in time, specifically to the leisure technology available for patients. The adults assigned more importance to the organization of the hospital stay, in particular, for adolescents to be admitted with patients of the same age and for them to receive academic support in the hospital.

Conclusions: Adolescents express a coherent perspective about the aspects that may help them to feel better in the hospital, in some ways different from the perspective of the adults who care for them.

Key words: Adolescent, Hospitalized; Patient Participation; Episode of Care; Patient-Centered Care; Hospital Planning

Introduction

Pediatric health services have changed from focusing on diagnosis and treatment of infectious diseases to centering on prevention and control of patients' chronic conditions. As a consequence of this change, the concept of health-related quality of life in the pediatric sphere has become increasingly relevant (Upton, Lawford, & Eiser, 2008). However, some discrepancies have been observed between the assessments of well-being, health, quality of life, and quality of care made by children and adolescents and those of their parents or of the clinical staff. These differences have been observed both in samples of the general population (Jozefiak, Larsson, Wichstrom, Mattejat, & Ravens-Sieberer, 2008; Reinfjell, Diseth, Veenstra, & Vikan, 2006; Waters, Stewart-Brown, & Fitzpatrick, 2003) and in samples of sick children and adolescents (Lal, et al., 2008; Marino, et al., 2009; Shaw, Southwood, & McDonagh, 2006). The confirmation of these differences makes it necessary to assess the quality of life of young patients from diverse points of view. The same can be said about the assessment of health services with potential repercussions on such quality of life. Thus, proposals to incorporate the children's perspective in the services of health institutions are constantly increasing (Fernández-Castillo & López-Naranjo, 2006; Southall, et al., 2000). In the case of adolescent patients, there is also pressure to adapt health care to the specific psychosocial characteristics of this sector of the population.

From a developmental viewpoint, adolescence is seen as the transition from childhood to adult life and it implies important biological, psychological, and social changes that should be taken into account when providing health services to these patients (Bennet &

Tonkin, 2003; Hidalgo, González, & Montón, 2006). The scientific advances of medicine and the social changes of the past decades have increased our awareness of the need to protect and promote the health of adolescents, considered a specific population group, that is, with particular health characteristics and needs (Alderman, Rieder, & Cohen, 2003). Hospital rules should take into account the perspective of adolescent patients (Wensing & Grol, 1998). Life expectancy of children with severe diseases has improved significantly. The increase in the longevity of children with chronic diseases has led to an increase in the number of adolescents who suffer from such diseases and, consequently, an increase in the demand of hospital services for this sector of the population (Alderman, et al., 2003). However, adolescents represent a very small proportion of the total number of hospitalized patients, and their preferences and concepts of care differ from those of the adults (Farrant & Watson, 2004; Jedeloo, Staa, Latour, & Exel, 2009; Joffe, Radius, & Gall, 1998; Zimmer-Gembeck, Alexander, & Nystrom, 1997). Identifying these preferences is useful because they can provide the keys to design models of care focusing on the quality of life of these patients. Some studies conclude that the first step to improve adolescents' health-care experience is to ask them about their preferences (Britto, et al., 2007). Nonetheless, adolescents, as health-services consumers, are admittedly hardly ever consulted and they are under-represented in the research on the quality of these services (Blumberg & Devlin, 2006; Jedeloo, et al., 2009).

The purpose of the present work was to determine and compare the preferences and priorities of a sample of adolescents and of adults—the parents of adolescent patients and the clinical staff—with regard to diverse aspects of the care provided to adolescent patients in hospitals. We wished to determine and compare these preferences and

priorities in issues concerning potential ways to improve hospitals that could have an impact on the quality of life of adolescent patients.

Method

Participants

The study was conducted between April and September of 2009 with two groups of adolescent participants and two groups of adults. The first group of adolescents was made up of patients between 14 and 17 years of age who were hospitalized in the University Hospital of Salamanca. Inclusion criteria for this group were being a patient between 14 and 17 years of age who was admitted in that hospital between the months of April and September of 2009 in any unit except for Psychiatry and Gynecology. We excluded the patients from these units because we considered that, due to the specific pathologies attended in them, these patients' problems were quite different from those of the adolescents hospitalized in other units. A total of 126 patients met the criteria and 96 of them agreed to participate and completed the questionnaire. They all signed an informed consent form and received a present of writing material (about 6 euros value) at the end of the investigation. The second group of adolescents was an incidental sample comprising 268 students from two secondary education institutes whose teachers agreed to collaborate in the investigation. The students participated voluntarily, completing the questionnaire at the institute and they did not receive any reward for their participation. The first group of adults was made up of 96 fathers or mothers of patients who met the above-mentioned inclusion criteria. The second group of adults comprised 52 health professionals from the services of the above-mentioned hospital

where adolescent patients were cared for and who agreed to complete the questionnaire they received from the nursing supervision of their corresponding unit.

Questionnaire

To collect the information, we used a questionnaire developed for this investigation. The questionnaire was based on previous investigations about the preferences of adolescents regarding their health care (Britto, et al., 2004; Britto, et al., 2007; Gusella & Ward, 1998; Hoffman, Freeman, & Swann, 2009; Miller, Friedman, & Coupey, 1998). We also took into account the international recommendations for the care of minors in health institutions (Ullán & Bolver, 2008). None of the aforementioned investigations of adolescents' preferences with regard to their hospital care was carried out in Spain. We therefore considered it necessary to develop an assessment instrument adapted to the situations of Spanish hospitals and, more specifically, to the characteristics of the care received in them by adolescent patients (Ullán, Gonzalez, & Manzanera, 2010). The questionnaire included 15 Likert-type items to tap the importance of diverse aspects for the improvement of the adolescents' stay at the hospital, 6 questions with various response options about their preferences concerning their roommate and the accompanying person at night, and one question that requested the participants to imagine they had to advise the hospital about how to improve the situation of hospitalized adolescents, selecting from among seven options the one they thought should be carried out first. Several versions of the questionnaire were prepared: one for the hospitalized adolescents, one for the nonhospitalized adolescent participants, one for the parents of the adolescent patients, and one for the clinical staff. The versions for the adolescents included data about their age, sex, and hospitalization experience;

the parents' version included data about the age, sex, and hospitalization experience of their children, and the version for the clinical staff included data about their experience of caring for adolescents in the hospital. The complete versions of the questionnaire can be consulted at <http://gredos.usal.es/jspui/>

Analysis strategy

The statistic tests were performed with the SPSS program (version 15). For the Likert-type formatted questions, we calculated the descriptive statistics—mean and standard deviation—for each group of adolescents and adults. We also calculated the confidence intervals of the mean. To compare the groups, we used nonparametric (Kruskal-Wallis) and parametric tests (ANOVA and Student's t-test), obtaining the same results. We used Spearman's rank correlation coefficient between the means of the responses of the four groups. For the questions about the most suitable roommate for adolescents and those concerning the recommended initiatives, we calculated the proportions of responses in each group and we compared the groups using the chi-square test (3x4 and 2x4 with Yates' correction), and subsequent z-tests to compare the proportions.

Results

Of the 126 patients considered eligible, 96 (76%) agreed to participate and completed the required information. Of them, 16 (16%) were hospitalized in a Pediatric unit and 80 (84%) in adult units. In the group of nonhospitalized adolescents, 125 (46%) reported having been hospitalized at some time, and 247 (93%) said they had visited someone at the hospital at some time. There were no significant sex differences in any of these

aspects. The distribution by age and sex of the adolescent participants is shown in Table 1. Of the 148 adult participants, 52 were health professionals at the hospital where the investigation was conducted, and 96 were adults who accompanied the hospitalized adolescent patients. Of these 96 adults, 51 (52%) were the mothers of hospitalized patients, 32 (33%) were fathers, and 6 (6%) were relatives or legal representatives of the minors and were accompanying them. Of the 52 health professionals who participated in the investigation, 44 (88%) were nursing professionals, 3 (6%) were medical staff, and the rest were other professionals who worked in the hospital. Of the 52 health professionals who participated, 37 (74%) reported having more than 10 of years experience at their job, 13 (25%) reported having a lot of experience working with adolescents in the hospital, and 25 (47%) reported having little or very little experience working with adolescents in the hospital.

Participants were requested to rate the importance of 15 aspects aimed at the improvement of the adolescents' hospitalization on a scale ranging from 1 (*not very important*) to 5 (*very important*). In Table 2 are shown the mean ratings of the four groups for each one of the aspects listed. Clinical staff agreeableness and not delaying medical tests so that patients' hospitalization would be as brief as possible appear as the aspects with a higher mean rating in all four groups. The parents' permanent presence is part of a block of items with higher ratings in the groups of hospitalized adolescents and parents of adolescent patients, and clear medical information is part of a block of items with higher ratings in the groups of nonhospitalized adolescents, parents, and clinical staff. Friends' visits are highly rated by nonhospitalized adolescents and by clinical staff as important aspects to improve the experience of hospitalization. Decoration of the admittance rooms to adapt them to adolescents' taste was rated the lowest in all the

groups. We calculated the correlation between the mean scores of the items of each group with Spearman's rank correlation coefficient (see Table 3). The highest correlations were observed between the mean scores of the two groups of adolescents (hospitalized and nonhospitalized), followed by the correlations between the mean scores of the groups of adults (parents and clinical staff). The lowest, albeit statistically nonsignificant, correlation was the one between the mean scores of the group of parents and the nonhospitalized adolescents.

In order to obtain more precise information about the aspects with the highest and lowest rating coincidence between adolescents and adults, for each group of adolescents, we compared the mean rating of each aspect with the mean rating of the same aspect made by the subjects of the two groups of adults. In Table 4 are shown the comparisons of the ratings performed by the hospitalized adolescents and by the two groups of adult participants, first listing the items whose importance was rated with a significantly higher score by the group of hospitalized adolescents than by the group of parents of adolescent patients, arranged according to the criteria of descending difference of means. The comparison of the ratings by hospitalized adolescents and by clinical staff is then presented. We observed that the hospitalized adolescents rated access to Internet in the hospital more highly than the group of parents. The parents rated the following aspects more highly than the adolescents did: fast medical tests, clear medical information, their own permanent presence in the hospital to accompany their children, adolescents' not having to share a room in the hospital with adult patients, and academic support for their children in the hospital. The hospitalized adolescents rated having free TV in the room and access to Internet in the hospital more highly than did the clinical staff. Like the parents, the clinical staff generally rated the following

aspects more highly than did the adolescents: for these patients to be admitted with same-age children and not with adults, clear medical information, and academic support for these patients.

Following this same outline, in Table 5 are presented the comparison of the ratings made by the nonhospitalized adolescent participants and by the two groups of adults. In this case, we note the higher rating of nonhospitalized adolescents, compared to the group of parents, of visits from friends and relatives, being able to use Internet in the hospital, having more room for their personal belongings the room, for people to knock before entering, and spaces outside of the room to spend time with friends, other patients, or relatives. As in the case of the hospitalized adolescents, we also observed that this group of participants rated free TV in the room and access to Internet higher than the clinical staff.

Table 6 shows the information regarding the questions about the roommate and the accompanying person at night that are considered the most suitable for hospitalized adolescents. For each response option to each question, the number (n) of people in each group who chose that option and the percentage (%) that this number represents of the total group are shown. When the differences observed among the proportions of responses given in each group were significant, we performed a pairwise comparison of the proportions of the columns with a Z -test. It is worthwhile to note the preference expressed in all the groups for the adolescents to share the hospital room with patients of the same age. In the case of having to decide between the age criterion and that of similar medical problems to choose a roommate for the adolescents while in the

hospital, all the groups preferred similar age first. The majority also expressed preference for the adolescents to be accompanied in the hospital at night. The parents were indicated as the preferred accompanying people by the majority, both by the adolescents and by the adult participants.

Seven possible initiatives to improve adolescents' hospitalization were presented to the participants and they were asked to indicate which one they would recommend doing first if they had to advise the hospital. In Table 7 are shown the seven initiatives and the number and percentage of people from each group who chose each initiative as the one they would recommend implementing the first to improve adolescents' hospitalization. When these differences were significant, we performed a pairwise comparison of the proportions of the columns with a Z-test. The initiative chosen firstly in all cases by most of the groups, except for the nonhospitalized adolescents, was to reserve an area of the hospital for the admittance of adolescent patients. The nonhospitalized adolescents more frequently indicated as the first initiative the promotion of visits from friends and relatives and the creation of spaces in the hospital where the adolescents could spend time chatting, listening to music, etc. This latter aspect was also chosen very frequently by the hospitalized adolescents. The initiative of facilitating academic support to the adolescent patients was proposed to a greater extent by the adult participants (parents and clinical staff) than by the adolescents. The initiative of improving the patients' privacy was considered more often in the group of clinical staff than in the others.

Discussion and Conclusions

The adolescents of this study assigned more importance than the adults, on average, to issues about leisure technology in the hospital, specifically, having access to the Internet and free TV in the room. The adults granted more importance than the adolescents to issues concerning the organization of the stay in hospital, particularly, for the adolescents to be admitted with patients of the same age and not with adult patients, and for them to receive academic support from teachers in the hospital. In addition, the parents rated their permanent presence in the hospital, to accompany their hospitalized adolescent children, as more important than did the adolescent participants and the clinical staff.

Despite these differences, the agreements are very significant, especially in some aspects such as the importance of the agreeableness of the clinical staff to improve adolescents' hospitalization. The quality of interpersonal care and of communication were identified as key elements in the quality of patient care (Campbell, Roland, & Buetow, 2000; Sitzia & Wood, 1997) and the importance granted by all the groups to the agreeableness of the clinical staff to improve adolescents' hospitalization is consistent therewith. Other investigations have also verified that young people rated aspects of interpersonal care highly when judging the quality of the health care received (Britto, et al., 2004; Farrant & Watson, 2004; Hoffman, et al., 2009; Mauerhofer, Bertchold, Akre, Michaud, & Suris, 2010). Moreover, our data reveal the high degree of agreement expressed both by adolescents and adults concerning the importance of the agreeableness of clinical staff to improve young patients' hospitalization experience. In contrast, the same level of consensus was not observed in issues concerning how adolescent patients could spend time in the hospital. Boredom and the lack of opportunities for amusement are frequent complaints of hospitalized adolescents

(Blumberg & Devlin, 2006; Gusella & Ward, 1998). But, according to our results, the adults do not grant the same importance to these aspects as the adolescents.

It is noteworthy that the adolescent as well as the adult participants thought that the adolescent patients should share the room with patients similar to them in age or in pathologies. The adults granted this issue more priority than did the adolescents. If the room had to be shared either with someone of the same age or with the same pathology, the age criterion was preferred in all four groups. With regard to this, there was notable disagreement between the preferences of the adolescent patients, the parents, the clinical staff, and the rules of many hospitals that admit adolescents mainly in adult units (Ullán, et al., 2010).

Our study has various limitations. First, the hospitalized adolescents who participated in it received health care in a single hospital. The characteristics of this hospital represent the average of Spanish hospitals of the same size. This hospital follows the general rule of admitting patients in adult units as of 14-15 years of age, as in 80% of the Spanish hospitals, according to the available data (Ullán, et al., 2010). It would be appropriate to carry out multicenter studies to confirm the results in this aspect. Second, as the diverse clinical conditions of the participants were not considered, it would be important to assess the preferences and priorities of the adolescents taking into account the pathologies they may suffer, their chronic or acute nature, their severity, and prognosis.

As a conclusion of the study, the authors would like to mention a few aspects. First, the assessment of the preferences and priorities of the adolescent patients and their parents

may contribute to defining potential ways to improve care for these patients in the hospital. These potential aspects for improvement are shown in Figure 1. In this case, those related to speeding up the diagnostic tests to prevent long stays in the hospital and those involving the interpersonal relations and care that the health professionals provide to the adolescent patients are noteworthy. Second, we underline the different ratings that can be made by the patients and the adults that care for them in some aspects involving the quality of life of the adolescent patients. This issue is also shown in Figure 1. The priorities and preferences of the hospitalized adolescents coincide, in some aspects, with those of their parents and those of the clinical staff, but in other aspects, they are different. The same thing occurs with the priorities and preferences of the other groups of participants.

The different ratings of the parents and their children about aspects concerning the health-related quality of life in the pediatric sphere were interpreted as a consequence of the children's' and parents' different perspectives of health and well-being (Upton, et al., 2008). We can conclude this work along these same lines. The adolescents express a coherent perspective about the hospital and the aspects that can help them to feel better during their stay, in some ways, different from the adults' perspective, especially with reference to ways to spend time in the hospital. The design of patient-focused care systems obliges one to acknowledge these differences. Incorporating the adolescents' viewpoint into this design leads to integrating them as a part of the "strategic community of knowledge" (Fayard, 2003). The authors consider that this would contribute to improving the quality of life of adolescents who are undergoing the processes of hospitalization.

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TABLE 1. Distribution of the sample of hospitalized and nonhospitalized adolescents by age and sex

	Hospitalized adolescents <i>n</i> (%)	Nonhospitalized adolescents <i>n</i> (%)	<i>N</i>	
Age				$\chi^2(3, N = 355) = 0.37, p = .94$
14 years	25 (26.0%)	71 (26.5%)	96	
15 years	18 (18.8%)	54 (20.1%)	72	
16 years	25 (26.0%)	64 (23.9%)	89	
17 years	28 (29.2%)	70 (26.1%)	98	
Sex				$\chi^2(1, N = 364) = 0.93, p = .36$
Girls	45 (46.9%)	141 (52.6%)	186	
Boys	51 (53.1%)	127 (47.4%)	178	

TABLE 2. Importance of 15 aspects for the improvement of adolescents' hospitalization, rated on a scale ranging from 1 (*not very important*) to 5 (*very important*)

	Adolescents		Adults	
	Hospitalized <i>n</i> = 96	Nonhospitalized <i>n</i> = 268	Parents of patients <i>n</i> = 96	Clinical staff <i>n</i> = 52
	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>
Promptitude of tests so the stay in hospital will be brief**	4.5	4.3	4.8	4.6
Agreeableness of the clinical staff	4.4	4.4	4.6	4.6
Permanent presence of parents**	4.1	3.8	4.5	3.9
Free TV the room**	4.0	4.1	3.8	3.0
Access to Internet in the hospital**	4.0	3.9	3.5	3.4
Clear medical information that the patient can understand**	4.0	4.1	4.4	4.6
Friends' visits**	3.8	4.3	3.6	4.1
Spaces outside of the hospital room to spend time with friends or other patients of the same age**	3.7	3.9	3.6	4.0
Rooms to listen to music, watch TV, read, etc.*	3.6	3.9	3.7	3.8
People should always knock on the door before coming in	3.6	3.7	3.4	3.8
The adolescent should be admitted with patients of the same age**	3.4	3.1	4.1	3.8
The adolescent should not share the room with adult patients**	3.3	3.1	4.2	4.1
Support teachers for the adolescent patient in the hospital**	3.0	2.6	4.2	3.8
Room decorated according to adolescent taste	2.8	2.5	3.0	2.6
More room for personal things in the room**	2.6	3.2	2.8	2.7

A Kruskal-Wallis test was conducted to determine whether the group differences were significant.

* $p < .05$. ** $p < .01$.

TABLE 3. Correlation coefficients of the mean ratings by the four groups of the importance of 15 aspects for the improvement of adolescents' hospitalization

	HA	NHA	PAP	CS
Hospitalized adolescents (HA)	-	.83**	.61**	.52 *
Nonhospitalized adolescents (NHA)		-	.41	.53 *
Parents of adolescent patients (PAP)			-	.80**
Clinical Staff (CS)				-

Note. We used Spearman's rank correlation coefficient among the mean ratings of the importance of 15 aspects for the improvement of adolescents' hospitalization

*p<.05 **p<.01

TABLE 4. Differences in the mean scores of hospitalized adolescents (HA) and adults, parents of adolescent patients (PAP) and clinical staff (CS)

	HA-PAP	t_{df}
Aspects with a significantly higher mean rating in the group of hospitalized adolescents (HA) than in the group of parents of adolescent patients (PAP)		
Access to Internet in the hospital	0.49	2.44 ₁₈₃ *
Aspects with a significantly higher mean rating in the group of parents of adolescent patients (PAP) than in the group of hospitalized adolescents (HA)		
Promptitude of tests so the stay in hospital will be brief	-0.25	-2.50 ₁₈₉ *
Clear medical information	-0.45	-3.05 ₁₈₆ **
Permanent presence of parents	-0.50	-3.62 ₁₈₈ **
The adolescent should be admitted with patients of the same age	-0.77	-5.10 ₁₈₄ **
The adolescent should not share the room with adult patients	-0.92	-4.92 ₁₈₇ **
Support teachers for the adolescent patient in the hospital	-1.23	-7.08 ₁₈₄ **
	AH-CS	t_{gl}
Aspects with a significantly higher mean rating in the group of hospitalized adolescents (HA) than in the group of clinical staff (CS)		
Free TV the room	1.01	4.92 ₁₄₅ **
Access to Internet in the hospital	0.59	2.61 ₁₄₃ *
Aspects with a significantly higher mean rating in the group of clinical staff (CS) than in the group of hospitalized adolescents (HA)		
The adolescent should be admitted with patients of the same age	-0.47	-2.68 ₁₄₃ *
Clear medical information	-0.65	-3.98 ₁₄₄ **
The adolescent should not share the room with adult patients	-0.77	-3.41 ₁₄₅ **
Support teachers for the adolescent patient in the hospital	-0.80	-3.84 ₁₄₃ **

* $p < .05$ ** $p < .01$

TABLE 5. Differences in the mean scores of nonhospitalized adolescents (NHA) and adults, parents of adolescent patients (PAP) and clinical staff (CS).

	NHA-PAP	<i>t</i> _{df}
Aspects with a significantly higher mean rating in the group of nonhospitalized adolescents than in the group of parents of adolescent patients		
Friends' visits	0.63	5.15 ₃₅₇ **
Access to Internet in the hospital	0.40	2.49 ₃₅₃ *
More room for personal things in the room	0.34	2.53 ₃₅₅ *
People should always knock on the door before coming in	0.31	2.24 ₃₅₇ *
Spaces outside of the hospital room to spend time with friends or other patients of the same age	0.26	1.97 ₃₅₄ *
Aspects with a significantly higher mean rating in the group of parents of adolescent patients than in the group of nonhospitalized adolescents		
Clear medical information	-0.28	-2.45 ₃₅₅ *
Promptitude of tests so the stay in hospital will be brief	-0.49	-4.59 ₃₅₉ **
Room decorated according to adolescent taste	-0.51	-3.11 ₃₅₃ **
Permanent presence of parents	-0.71	-5.37 ₃₆₀ **
The adolescent should be admitted with patients of the same age	-0.99	-7.34 ₃₅₄ **
The adolescent should not share the room with adult patients	-1.14	-7.28 ₃₅₇ **
Support teachers for the adolescent patient in the hospital	-1.69	-10.84 ₃₅₅ **
	NHA-CS	<i>t</i> _{df}
Aspects with a significantly higher mean rating in the group of nonhospitalized adolescents than in the group of clinical staff		
Free TV the room	1.08	6.82 ₃₁₇ **
Access to Internet	0.50	2.54 ₃₁₃ *
More room for personal things in the room	0.46	2.88 ₃₁₆ **
Aspects with a significantly higher mean rating in the group of clinical staff than in the group of nonhospitalized adolescents		
Promptitude of tests so the stay in hospital will be brief	-0.32	-2.22 ₃₁₆ *
Clear medical information	-0.49	-3.47 ₃₁₃ **
The adolescent should be admitted with patients of the same age	-0.69	-4.04 ₃₁₃ **
The adolescent should not share the room with adult patients	-0.99	-4.96 ₃₁₅ **
Support teachers for the adolescent patient in the hospital	-1.27	-6.34 ₃₁₄ **

*p<.05 ** p<.01

TABLE 6. Number and percentage of subjects who chose each one of the response options in the questions about preference for a roommate and the accompanying person in the hospital at night for adolescent patients

Content of the question and response options	Hospitalized adolescents	Nonhospitalized adolescents	Parents of adolescent patients	Clinical staff
	<i>n</i> (%) <i>n</i> = 96	<i>n</i> (%) <i>n</i> = 268	<i>n</i> (%) <i>n</i> = 96	<i>n</i> (%) <i>n</i> = 52
Preferences concerning the adolescent's room in the hospital**				
Individual	58 (60%) _a	137 (51%)	61 (64%) _a	17 (33%)
Shared	18 (19%)	42 (16%)	14 (15%)	26 (50%) _{b,c,d}
Doesn't matter	20 (21%)	87 (32%)	19 (20%)	8 (15%)
$\chi^2(6, N = 507) = 44.4, p < .01$				
If an adolescent patient must share the hospital room with another patient, is it preferable to share with someone of the same age or doesn't the roommate's age matter? **				
With someone of the same age	83 (86%)	231 (86%)	94 (98%) _{c,d}	50 (96%)
The roommate's age doesn't matter	13 (14%) _b	36 (13%) _{b (9-17)}	1 (1%)	2 (4%)
$\chi^2(3, N = 510) = 15.3, p < .01$				
If an adolescent patient must share the hospital room with another patient, is it preferable to share with someone who has similar medical problems or doesn't this aspect matter? **				
With someone who has similar medical problems	54 (56%)	139 (52%)	72 (75%) _{a,c,d}	25 (48%)
This aspect doesn't matter	42 (44%) _b	127 (47%) _b	20 (21%)	27 (52%) _b
$\chi^2(3, N = 506) = 21.1, p < .01$				
If an adolescent patient must share the hospital room, is it preferable for the roommate to have similar medical problems, although he/she is of a different age, or is it better for the roommate to have about the same age, regardless of the medical problems he/she may have?				
Roommate with similar medical problems	35 (36%)	69 (26%)	24 (25%)	11 (21%)
Same-age roommate	61 (64%)	189 (71%)	66 (69%)	40 (77%)
$\chi^2(3, N = 495) = 4.7, p = .19$				
How would adolescent patients be better off at night in the hospital? **				
Accompanied	90 (94%)	223 (83%)	94 (98%) _c	51 (98%)
Alone	5 (5%)	38 (14%) _b	1 (1%)	1 (2%)
$\chi^2(3, N = 503) = 22.1, p < .01$				
Who is the most suitable person to accompany adolescent patients at night in the hospital?				
Parents**	$\chi^2(3, N = 510) = 33.6, p < .01$ 88 (92%) _c	193 (72%)	87 (91%) _c	48 (92%) _c
Other relatives	$\chi^2(3, N = 510) = 3.8, p = .29$ 14 (15%)	24 (9%)	11 (11%)	3 (6%)
Friends **	$\chi^2(3, N = 512) = 93.5, p < .01$ 7 (7%)	108 (40%) _{a,d}	0 (0%)	4 (8%)
Professional clinical staff ^f	$\chi^2(3, N = 512) = 11.4, p = .01$ 1 (1%)	8 (3%)	9 (9%)	1 (2%)

Note. For each question, we include the number of people from each group who chose each response option (*n*), the percentage (%) that this number represents of the

total group, and the value of χ^2 , with the degrees of freedom, the sample size, and the corresponding p value to appraise the statistical significance of the differences in the proportions of responses of the four groups. When these differences were significant, we performed a paired comparison of the proportions of the columns with z-tests. The results are based on bilateral tests with a .05 level of significance. Using Bonferroni's correction, we adapted the tests for all the pairwise comparisons within a row for each subtable situated to the right.

a The proportion of this cell is significantly higher than that of the group of clinical staff

b The proportion of this cell is significantly higher than that of the group of parents of adolescent patients

c The proportion of this cell is significantly higher than that of the group of nonhospitalized adolescents

d The proportion of this cell is significantly higher than that of the group of hospitalized adolescents

f More than 20% of the cells of this row had expected frequencies of less than 5

* $p < .05$. ** $p < .01$.

TABLE 7. Number (n) and percentage (%) of participants of each group that indicated each one of the initiatives as the one they would recommend carrying out first to improve adolescents' hospitalization

	Hospitalized adolescents <i>n</i> = 96	Nonhospitalized adolescents <i>n</i> = 268	Parents of adolescent patients <i>n</i> = 96	Clinical staff <i>n</i> = 52
Initiatives	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Reserve a hospital area for patients between 14 and 18 years of age and not make such patients share rooms either with adults or with small children $\chi^2 (3, N = 512) = 47.5, p < .01$	40 (42%) _b	54 (20%)	53 (55%) _b	23 (44%) _b
Promote visits of friends and relatives and have quiet rooms reserved for such visits $\chi^2 (3, N = 512) = 23.9, p < .01$	10 (10%)	64 (24%) _{a,c}	5 (5%)	5 (10%)
Create spaces outside of the rooms to be used by the adolescent patients for chatting, reading, listening to music, playing, etc. $\chi^2 (3, N = 512) = 7.5, p = .06$	20 (21%)	65 (24%)	15 (16%)	5 (10%)
Facilitating academic aid to the boys and girls during their hospitalization $\chi^2 (3, N = 512) = 10.9, p = .01$	12 (13%)	24 (9%)	20 (21%) _b	10 (19%)
Improving the decoration of the rooms and adapting it to adolescents' taste $\chi^2 (3, N = 512) = 2.6, p = .45$	3 (3%)	6 (2%)	4 (4%)	0 (0%)
Program activities and alternatives to fill in time in the hospital (art workshops, games, etc.) and that the adolescent patients can participate in them $\chi^2 (3, N = 512) = 0.2, p = .97$	13 (14%)	33 (12%)	11 (11%)	7 (13%)
Improve the patients' privacy in the hospital $\chi^2 (3, N = 512) = 2.7, p = .44$	11 (11%)	32 (12%)	10 (10%)	10 (19%)

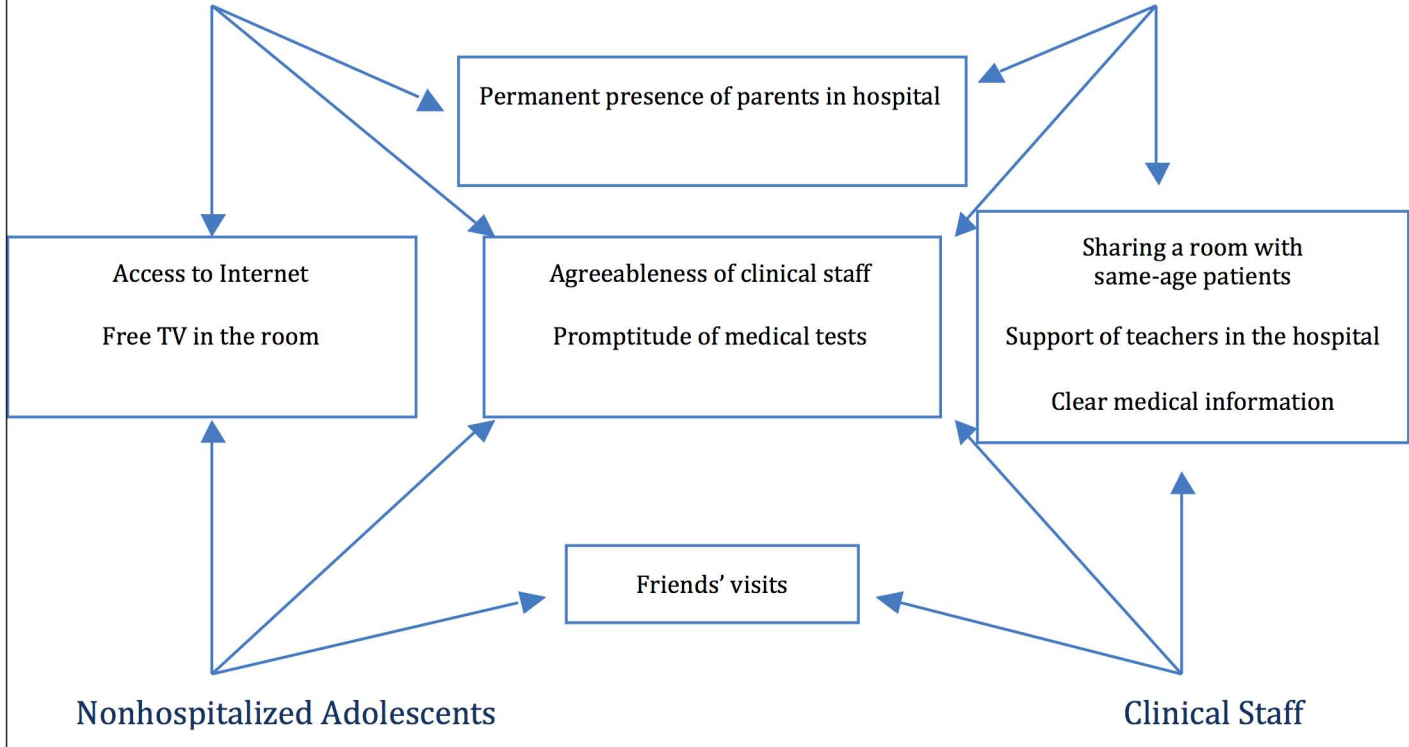
Note. For each question, we include the number of people from each group who chose each response option (n), the percentage (%) that this number represents of the total group, and the value of χ^2 , with the degrees of freedom, the sample size, and the corresponding p value to appraise the statistical significance of the differences in the proportions of responses of the four groups. When these differences were significant, we performed a paired comparison of the proportions of the columns with z-tests. The results are based on bilateral tests with a .05 level of significance.

- a The proportion of this column is significantly higher than that of the column of hospitalized adolescents
- b The proportion of this column is significantly higher than that of the column of nonhospitalized adolescents
- c The proportion of this column is significantly higher than that of the column of parents of adolescent patients

Main dimensions of quality of hospitalization for:

Hospitalized Adolescents

Parents of patients



Nonhospitalized Adolescents

Clinical Staff