SCREENING FOR PSYCHOSOCIAL PROBLEMS IN CHILDREN ATTENDING THE PEDIATRIC CLINIC AT KING KHALID UNIVERSITY **HOSPITAL (KKUH) IN RIYADH (KSA)**

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هدف الدراسة: تقدير مدى تفشى الأعراض السلوكية والنفسية لدى عينة من مراجعي عيادات الأطفال بمستشفى الملك خالد

طريقة الدراسة: تم إعداد استبيان من جزأين الأول يحتوي عدد من المعلومات الأساسية عن المريض وعائلته وظروفهم الاجتماعية والاقتصادية والثاني عيارة عن مقياس مقترح جديد للأعراض السلوكية والنفسية لدى الأطفال (معدل من قائمة فحص الأعراض السلوكية لدى الأطفال) سمى مقياس الأعراض السلوكية والنفسية للأطفال (بيبسى) يتكون من 38 فقرة موزعة على خمسة محاور هي الأعراض السلوكية، مشكلات التعلم، الأعراض المزاجية، الخصائص الذاتية والأعراض

نتائج الدراسة: تم تحليل 321ورقة استبيان. بلغ متوسط القياس الكلي للعينة (22.3 على 114). سجلت أعلى قراءة كلية 84. متوسط قياس الأعراض السلوكية كان الأعلى نسبيا (7 على 27) بينما كان قياس مشكلات التعلم هو الأدنى (1.5 على 18). بلغ متوسط قياس الأعراض المزاجية (5.6 على 24) ومتوسط قياس الخصائص الذاتية (4.5على 24) ومتوسط قياس الأعراض الجسدية (4.3 على 24).

الخلاصة: أوضحت الدراسة إمكانية إجراء مسح للمشاكل السلوكية والنفسية لدى الأطفال في العيادات الخارجية إلا أن ذلك يتطلب توفير الوسائل اللازمة وتدريب الأطباء من أجل الحفاظ على صحة وسلامة أطفالنا.

الكلمات المرجعية: المشاكل السلوكية و النفسية - عيادات الأطفال - مقياس الأعراض السلوكية النفسية لدى الأطفال (بيبسي).

Introduction: Psychosocial problems are highly prevalent among children and adolescents. One approach to facilitating recognition and referral of these problems is to use parent-completed screening questionnaire as part of routine primary care.

Aim and methods: The purpose of this study was to determine the prevalence and type of psychosocial problems in a random sample of children attending the pediatric clinic at KKUH at the time of the study. A 2-part questionnaire was designed for the study. The first part contained basic biographic data in addition to items which reflect the socioeconomic status of the family. The second part of the questionnaire comprised the inventory, which is a modified version of the Pediatric Symptoms Checklist (PSC). The inventory consisted of 38 items classified into five categories. The total score of the inventory ranged from 0-114.

Results: Three-hundred-twelve questionnaires were completed. The average of the total score was only 22.3 out of 114. The lowest score was 0 and the highest 84. The average scores of behavioral symptoms (BS) were the highest (7.03 out of 27) while that of the learning problems (LP) was the lowest (1.5 out of 18). The average score for mood symptoms (MS) was 5.6 out of 24, that for personality characteristics (PC) was 4.5 out of 24 and that for somatic symptoms (SS) was 4.3 out of 24.

Conclusion: This study revealed the feasibility of screening for behavioral problems of children in an outpatient setting. It is necessary to implement screening procedures for psycho-behavioral problems, and train pediatricians to screen children presenting at clinics.

Key Words: psychosocial problems, children, pediatric clinic, pediatric psychosocial symptom inventory (PEPSI).

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INTRODUCTION

adolescents. 1-3 children and Epidemiological studies indicate that between 15% and 20% of children experience psychosocial problems (i.e., behavioral and emotional problems).4 Most of these children with psychosocial problems are treated by primary care physicians who fail to recognize these problems.⁵-Costello et al reported that physicians identify only 17% of these children, leaving 83% of children with psychosocial problems unidentified.4 Children untreated with psychosocial problems are likely to have difficulties in various aspects of their daily lives (e.g., school and relationships with peers and family) and have severe persistent problems.⁸

Psychosocial problems, such as socio-emotional

and behavioral problems, are highly prevalent

Under-recognition of psychosocial disorders is compounded by a number of economic and cultural barriers. Pediatricians do not have adequate training on psychosocial problems, 5-7 have no time during office visits to address mental health needs; their means of referral to mental health are somewhat limited; have no precise, validated screening procedures to identify children with the greatest need for intervention. 9

Suggestions to improve the rate of identification of children with psychosocial problems include the improvement of physicians' communication skills, the prompting of parents to disclose more psychosocial information to their child's physician, and paper-and-pencil instruments for screening children with or at risk for psychosocial problems. 10-14

One approach to facilitating recognition and referral of psychosocial problems is the routine use of parent-completed screening questionnaire at primary care visits. The Pediatric Symptom Checklist (PSC) was developed for this purpose. The PSC is a 1-page questionnaire on parents' impressions of their children's psychosocial functioning. Cut-off scores for school-age children indicating clinical levels of dysfunction have been empirically derived using receiver operator characteristic analyses in studies that compare the performance of PSC with other validated questionnaires and clinicians' assessment of children's overall functioning. 14-16 The PSC has proved to be a useful valid screening tool in general pediatric practice as well as in a variety of school, outpatient, and subspecialty pediatric clinic settings. 3,14,17-2

The purpose of this study was to: (1) design a new inventory more appropriate to this culture for the screening of psychosocial problems in children, (2) determine the prevalence of psychosocial problems in a sample of children attending the pediatric clinic at KKUH at the time of the study, and (3) determine the effect of sociodemographic variables on these problems.

METHODS

The questionnaire was designed by the two authors in collaboration with a senior child psychiatrist. The first part of the questionnaire contained basic biographic data including age, sex, nationality, child's school, number of siblings, mother's and father's age, education and work. In addition, there were items to which the answers were likely to reflect the socioeconomic status of the family. These comprised the monthly income, ownership of a car with a private driver, a house and a housemaid.

The second part of the questionnaire comprised of an inventory which could be considered a modified version of the Pediatric Symptoms Checklist (PSC). It was compiled from three well-known validated measures. Nineteen items were selected from The Pediatric Symptoms Checklist, with another nineteen items selected from either Achenbach Behavioral Checklist²⁸ or Conners' Rating Scales.²⁹ We suggest that this new composite inventory be named the "Pediatric Psychosocial Symptoms Inventory" (PEPSI).

The 38-item questionnaire was classified into 5 categories. They were scored from 0-3, with 0 indicating the absence of the symptom concerned, 1 indicating that the symptom rarely occurred, 2 indicating that the symptom occasionally occurred and 3 indicating frequent occurrence of the symptom. The total score of the inventory ranged from 0-114. Space was provided at the end of the inventory for parents to mention any other problem the child had if they so desired.

The categories included:

- 1. Mood symptoms (MS), which consisted of 8 items with a score of 0-24 (items 5, 13, 20, 23, 27, 28, 35, 38).
- 2. Behavioral symptoms (BS), consisting of nine items giving a score of 0-27 (items 3, 4, 7, 8, 9, 10, 12, 24, 32).
- 3 Learning problems (LP), made up of six items giving a score of 0-18 (items 11, 19, 21, 22, 30, 36).

- 4. Somatic symptoms (SS), comprising eight items and a score of 0-24 (items 6, 14, 17, 26, 29, 33, 34, 37).
- 5. Personality characteristics (PC), with seven items and a score of 0-21 (items 1, 2, 15, 16, 18, 25, 31).

(Please see the appendix for the inventory and its categories)

The questionnaire was completed by one of the pediatric clinic doctors who interviewed randomly selected parents attending the pediatric clinic with their children with various medical problems during the period of the study. The main target of the study was children from 5-12 years of age.

The data was entered into a personal computer using MS-Excel. The statistical analysis was accomplished by using SPSS. The descriptive statistics (mean and standard deviation) was used to describe the data. Student's t-test for independent samples and a one-way analysis of variance were used to compare the mean scores of sub-scales in relation to the categorized study variables.

RESULTS

Three-hundred-twelve questionnaires were completed. Five did not indicate their gender. Out of the remaining 307, 141 (45.2%) were males while 166 (53.2%) were females. Two-hundred eighty-eight (92.3%) were Saudi nationals. The age range was 2.5 years to 12.5 years. Two hundred ninety-seven (95%) of children were between 6-12 years of age. Two-hundred-eightyfive out of three hundred six (91.3%), attended regular schools. Three-hundred (96%) of the mothers were between 25-45 years. Two-hundred forty-nine (79.8%) of the mothers were housewives. Fifty-eight (18%) had no formal The majority of the fathers were education. between 30-50 years of age. Eleven (3.7%) of the fathers had no regular jobs. Twenty-four (7.8%) were not educated. Most families had between 3-10 children. The socioeconomic status of most of the participants was average and above average.

The mean of the total score and the mean of the five categories of the inventory are presented in Table 1. The mean of the total score is only 22.3 out of 114. The lowest score was 0 and the highest was 84. Out of 114, only 6.6% of the sample had scored 40 and above. The mean score of behavioral symptoms (BS) was the highest (7.03 out of 27) while that of the learning problems (LP) was the lowest (1.5 out of 18). The mean score for mood symptoms (MS) was 5.6 out of 24, that for personality characteristics (PC) was 4.5 out 24 and that for somatic symptoms (SS) was 4.3 out of 24. It is worth noting that only 9.5% of the sample scored 12 and above out of 24 for mood symptoms (MS), 10% scored 13 and above out of 27 for behavioral symptoms (BS), 2.4% scored 9 and above out of 18 for the learning problems (LP), 2% scored 12 and above out of 24 for somatic symptoms (SS) and only 5.5% scored 10 and above out of 21 for personal characteristics (PC).

Statistically significant differences were detected only for the score on the learning problems (LP) across the educational level of the mother (p=0.01), and the socioeconomic status (p=0.016), in addition to the score for the somatic symptoms (SS) across the educational level of the father (p=0.02).

DISCUSSION

Epidemiologic studies indicate that up to half of pediatric visits reflect behavioral, psychosocial, and educational concerns.³⁰ Most of these are psychosocial problems that are not severe enough for classification as psychiatric disorders, but which, interfere with the children's social and academic development.³¹ Identification of parental concerns about their children's behavior and evidence of problematic behavior and early psychopathology are increasingly being accepted as part of the stated responsibilities of primary care providers.³²

Nevertheless, pediatricians do not feel adequately trained and/or do not have the time to evaluate every child's psychosocial status.^{5-7,15} One method of focusing the limited time available on those children likely to have psychosocial problems would be to use a screening procedure. 33,34

Table 1: The mean of the total score and the five categories of the inventory (PEPSI)

	Mood symptoms	Behavioral symptoms	Learning problems	Somatic symptoms	Personality characteristics	Total score
Maximum score Mean ± SD	24 5.6 ± 4.1	27 7.0 ± 4.2	18 1.5 ± 2.3	24 4.3 ± 2.9	21 4.6 ± 2.9	114 22.3 ± 10.1

As with any screening test, a psychosocial screening procedure must be economical, brief, accurate, and easy to understand, administer and interpret.¹⁷ Standardized questionnaires must also be reliable, sensitive, and relatively specific.³⁵

The Achenbach Child Behavior Checklist (CBCL) is the questionnaire most thoroughly validated for screening, but is probably not suitable for a busy office practice because it has 138 questions, takes 20 minutes to complete, and is quite difficult to score and interpret. Pediatric Symptom Checklist (PSC) is brief, can be completed in minutes, and administered and scored while the child is in the waiting room waiting to see the physician.¹⁷

However, one major shortcoming of such short questionnaires is that they were mainly designed for societies that are considerably different from ours, which may affect the comprehension or appropriate completion of the questionnaire. It was the belief of the authors that the phrasing of a considerable number of items in the PSC was confusing to parents because they were either unclear and imprecise or overlapped with other items in the same questionnaire. The authors therefore, modified the PSC in a trial to overcome these problems.

A mean score of 22.3 out of 114 is considered rather low. Possible explanations for this very low-level reported are: (1) problems with the questionnaire itself; (2) inappropriate procedures in completing the questionnaire; (3) deliberate underreporting of psychosocial problems by parents for various reasons; (4) the psychosocial problems among the sample studied is really low.

It is true that the questionnaire is not yet standardized, or tested for validity and reliability. However, the fact that it was synthesized from standardized screening questionnaires like the CBCL, Conners, and PSC and was put together by two senior child psychiatrists with a wide experience in the field and a senior general pediatrician gives it some degree of plausibility. Nevertheless, the new inventory awaits further extensive studies for its validity, reliability and standardization.

To eliminate ambiguity and/or inaccuracies in completing the questionnaire, a senior resident in the outpatient clinic was asked to interview the parents and complete the questionnaire on behalf of parents at the clinic. The process was more like a structured interview than an unsupervised completion of a questionnaire by parents alone.

We believe that this may have raised the reliability of the process.

It is possible that parents were unaware of their children's behavioral problems. Such a lack of awareness may be due to the lack of education or to cultural beliefs that tolerate certain types of behavior. Some parents, aware of the clinician's discomfort with behavioral or developmental issues are reluctant to bring their concerns to their primary care pediatrician's attention. parents sometimes felt that there were no behavioral or developmental solutions to problems and, therefore, felt the expression of these concerns was futile.35

With the persisting social stigma and the assumption of parental guilt with regard to mental health issues, parents are reluctant to raise concerns about their child's behavior to pediatricians, to avoid embarrassment, shame or blame. In some contexts, parents do not think pediatricians are interested or appropriately trained to deal with behavioral issues.³² To our knowledge, this is the first study of pediatric psychosocial problems in the outpatients using the pediatric symptoms checklists (PSC) or a modified version of it. We are not aware of any similar studies either in our society or in other Arab countries.

Because of the low incidence of reported psychosocial problem in this study, any correlation or association with the many social and economic factors studied may not be evident or valid.

Several limitations must be considered when interpreting the results of this study. First, a new non-standardized measure of children's psychobehavioral problems was used. Secondly, the sample from our outpatient clinic may not be representative of the entire society, which may affect the generalization of the results. A final limitation is that the study did not include any inquiry to find out if those patients who scored high on the scale were referred to psychiatric or behavioral / developmental services.

CONCLUSION

This study revealed the feasibility of screening children for behavioral problems in the outpatient setting. The recommended new inventory needs further testing, validation and standardization. The prevalence of reported psycho-behavioral problems is low. This may either reflect reality or due to instrument problems and/or parental underreporting. Implementing screening procedures for psycho-behavioral problems and the training of pediatricians to conduct this screening is necessary for the well-being of our children.

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Appendix 1: The Pediatric Psychosocial Symptoms Inventory (PEPSI)

1.	Is down on himself or herself	يشعر أنه أقل قدرا من غيره	.1
2.	Has no hobbies	ليس لديه هوايات أو اهتمامات معينة	.2
3.	Get hurts frequently	يتعرض للإصابات (سقوط - جروح – رضوض - حروق) كثيرا	.3
4.	Demanding	مطالبه کثیره	.4
5.	Moody	مصاب عبره متقلب المزاج	.5
6.	Bedwetting	یتبول فی فراشه	.6
7.	Fidgety	پيبون في فراسد کثير الحركة	.7
8.	Fight with others	عثير الحرك	.8
9.	Tells lies	یستجر مع ۱۱ حرین یکذب	.0
10.		يحدب كسول	
	Lazy	-	.10
11.	Cannot concentrate	عدم التركيز	.11
12.	Has difficulty playing quietly	لا يلعب بهدوء	.12
13.	Cries a lot / easily	يبكي كثيرا وبسهولة	.13
14.	Bites nail / sucks finger	يقضم أظافره أو يمص أصابعه	.14
15.	Has no friends	ليس لديه أصدقاء	.15
16.	Likes to be more with adults / attach more to adults	يتعلق بالكبار	.16
17.	Complains of aches and pains	يشكو من ألام و أوجاع متكررة	.17
18.	Spends more time alone	يقضى وقتا طويلا بمفرده	.18
19.	Less interested in school	لا ير غب في الدراسة	.19
20.	Feels sad / unhappy	يبدو حزينا معظم الوقت	.20
21.	Absent from school	يتغيب عن المدرسة	.21
22.	Dropping school grades	مستواه الدراسي يتدهور	.22
23.	Worries a lot	۔ یقلق کثیر ا	.23
24.	Does not listen to rules	لا يتقيد بالأو امر	.24
25.	Depends on others to do his/her things	يميل إلى الاعتماد على الآخرين	.25
26.	Tires easily / little energy	ينعب بسرعة	.26
27.	Is irritable / Angry	عصبي المزاج	.27
28.	Does not show feelings	مشاعره باردة	.28
29.	Has uncontrolled purposeless movements	تظهر عليه حركات لا إرادية	.29
30.	Has learning difficulties	لدیه صعوبات فی التعلم	.30
31.	Seems shy	خجول	.31
32.	Takes things that do not belong to him/her	يسرق	
	(Steals)		.32
33.	Has poor appetite	شهيته للأكل ليست جيدة	.33
34.	Has sleep problems	لديه مشاكل في النوم	.34
35.	Impulsive	استجاباته سريعة وغير متوقعه (اندفاعي)	.35
36.	Has problems with speech	لديه مشاكل في الكلام والنطق	.36
37.	Soils his/her clothes	يتبرز في ملابسه	.37
38.	Is mostly afraid	يخاف كثيرا (لديه مخاوف كثيرة)	.38