Even if they are not aware of it, general practitioners improve well-being in their adolescent patients

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KEY MESSAGES
- Consulting a GP has an important positive psychological impact on adolescents and especially so for those who experience distress.
- GP tend to underestimate the improvement adolescents feel after the consultation.
- GPs do not correctly assess adolescents’ perceptions of their health status, in particular in adolescents having trouble.

ABSTRACT
Background: Most adolescents consult their general practitioner (GP) for common reasons, somatic or administrative but many of them have hidden feelings of distress. 
Objectives: To assess the immediate impact of ‘ordinary’ consultations on feelings of distress among adolescents and to compare adolescents experiencing difficulties (D) to those with no difficulties (N). To analyse how accurately GPs assess the impact of their consultation on adolescents’ feelings. 
Methods: GPs were randomly selected from two non-contiguous French administrative areas between April and June 2006. Fifty-three GPs gave two questionnaires to the first 10 to 15 adolescents aged 12 to 20 seen in consultation. One questionnaire was issued before the consultation and the other one afterwards. Adolescents had to position themselves about different aspects of well-being and say where they would seek help if they had problems. A GP questionnaire assessed how well they estimated their impact on the adolescent’s feeling of well-being. 
Results: Six hundred and sixty-five adolescents were assessed. They reported feeling better about their health, being able to talk, having someone to talk to or to confide in and on feeling understood. The D group (n = 147) felt significantly better compared to the N group (n = 518). GPs tended to underestimate this improvement, especially regarding adolescents in the D group feeling better about their health. 
Conclusions: Consulting a GP generates increased well-being among adolescents, especially for those experiencing difficulties. GPs tend to underestimate the positive impact they may have. Further studies are needed to explore if this benefit is permanent over time.

Introduction
Many adolescents experience difficulties and psychological issues [1]. However, these disturbances are difficult to describe in nature and intensity [2]. On the General Health Questionnaire 12 (GHQ 12), a quarter of young people complain of psychological upheaval, and half report distress or impaired well-being [3]. It is of major importance to detect these issues because they are correlated with risk-prone and acting-out behaviour [4]. Adolescents find it difficult talk to a doctor about difficulties they are facing. This may be because they
think that GPs only deal with somatic problems [5],
cannot provide ‘talking’ therapy, and may be dismissive
of psychological distress [6]. Adolescents consult a
GP for a psychological reason in no more than 8% of
cases [7]. Identifying mental issues is even more com-
plicated in these adolescents because they do not
tend to seek specific assistance [8–10]. They often
report trouble communicating with adults [11].

Conversely, general practitioners (GPs) do not
always detect which adolescents are in distress and
sometimes feel unable to help [12,13]. But youth sui-
cide could be prevented by earlier recognition and
and treatment of psychological distress [14]. Thanks to
their communication skills alone, consulting a GP
seems to help adolescents talk about personal difficul-
ties [13,15,16]. Some studies have analysed what
makes the consultation more beneficial for patients
[17]. Others have assessed how the GP’s consulting
style affects patient satisfaction. However, to our
knowledge, no study has analysed if the consultation
can affect adolescents’ feelings and how GPs perceive
the benefit of the consultation.

This quantitative study aimed to answer two ques-
tions: (a) Do consultations with a GP improve
adolescents’ well-being; and, are there differences
between adolescents experiencing distress or not? (b)
Do GPs perceive their impact on adolescents’ well-
being accurately? Our hypotheses are that (a) a con-
sultation with a GP does not have the same impact on
adolescents experiencing greater or lesser distress; and
(b) that GPs underestimate the benefit of their consul-
tations on adolescents’ well-being.

### Methods

#### Study design

This study was performed in two non-contiguous
French administrative areas of the French Region
‘Poitou-Charentes’ between April and June 2006. The
population is representative of the overall French
population with no ethnic or cultural specificity. In the
application of French law, this study did not require
approval by an ethics committee. This paper is the
third article from the same original study (Box 1).

#### Selection of GPs and adolescents

The investigators were GPs in private practice. They
were randomly selected from a free online doctor di-
rectory and individually contacted by investigators. The
solicitation ended when 30 GPs accepted to take part
in the study in each administrative area. After signing
the agreement form, GPs were to give every

### Consecutive adolescent aged 12 to 20 years seen in
consultation for whatever reason the opportunity to
take part in the study. They were to include between
10 and 15 adolescents.

#### Questionnaires

Each consultation generated three questionnaires.
Whether accompanied or not, the adolescents com-
pleted two questionnaires confidentially; one before
the consultation and another one afterwards. The GPs
completed a questionnaire after each consultation.
Three experts designed the questionnaires: a GP (PB),
a professor in paediatric psychiatry (DM), and a profes-

#### Visual Analogue Scales

Adolescents had to position themselves in relation to
how they perceived their health status, to what extent
they had someone they could talk about problems

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**Box 1. Previous works**

Three different articles were written from the
same original study the current paper was part
of.

The first article showed an improvement in
adolescents’ feelings after consultation. This
improvement is independent of the doctor’s
experience in adolescents’ issues [24]. The
second article showed that a third party does
not influence how adolescents talk to their GPs
[22]. The current paper explores the fact that
adolescents experiencing difficulties feel better
than adolescents without difficulties after an
‘ordinary’ consultation. It took 10 years to submit
it for publication because one of the investiga-
tors gave up on this work. However, we thought
it was relevant to share this unknown data.
with, someone to confide in if they had problems and someone they felt could understand them. Another VAS about music whose answer we assumed did not change during the consultation, tested the level of VAS reliability.

The VAS were composed of a 10 cm horizontal line with small perpendicular graduation marks, 3 mm apart so that their number was big enough to prevent visual tracking. A light green cone increased from the negative answer (a point) to the positive answer (12.5 cm). At each extremity, text explained the ideas on which the adolescents and GPs had to position themselves (Box 2).

The VAS was oriented randomly from the right or the left to focus attention, and the subject was asked to position him-/herself between the two extremities. The distributions did not differ between these VAS and alternative approaches (numeric input scales, radio button scale, VAS with or without feedback) [18].

The ‘Adolescent after consultation’ questionnaire included the same five VAS and an extra VAS assessing how the consultations met their expectations. The GP’s questionnaire analysed the GP’s perception of the adolescent’s thoughts and feelings with a VAS. The items were the same as in the adolescent ‘after consultation’ questionnaire except for the music question (Box 2).
which I am consulting today’ (irrespective of whether the subject wanted to talk about them). The N group included all other adolescents.

No data was eliminated from the analyses, because there was no significant variation or difference between groups on the music question.

The positions of the marks on the VAS were measured by 200 mm ruler, deriving a value between 0 and 100. Data was captured in an EpilInfo database. A second operator repeated the measures independently.

Descriptive analysis of the answers and the changes in feelings before and after the consultation were performed in each group. The $\chi^2$ test for proportions and the non-parametric Mann–Whitney test for scales were used for comparisons between groups using SAS/STAT software. Matched comparisons (before versus after consultation, adolescent versus GP) were performed using the paired Wilcoxon test. Between-groups comparisons of evolutions were analysed with covariance analyses adjusted for age and gender.

An estimated sample size of 600 consultations was required to provide 90% power and to detect a minimum 10-point difference on the 100-point scale (as used in pain VAS in which 10 mm is the smallest clinically relevant difference) with a standard deviation $\leq 30$ mm in the comparison between adolescents experiencing difficulties and the others, if the prevalence of difficulties was 20% [19].

Results

Description of GPs

Fifty-three GPs (17 women, 36 men) aged 32 to 60 years (mean age 45.8 years) took part. There were more GPs working in urban areas (Table 1).

Description of adolescents

Nine consultations had to be excluded: six patients were under 12 and three adolescents did not notify their age. One adolescent did not disclose his gender. Therefore, we excluded this result in gender comparisons, but included it in the other analyses (Figure 1).

Overall, 665 adolescents were analysed, predominantly women (59.5%) and 64% were accompanied: 80% by their mother, 10% by their father (Table 2).

Only 8% of girls and 4% of boys consulted for psychological reasons. Among those consulting for administrative or somatic reasons, 17% notified they had ‘worries’ other than the reason of their visit. In the D group, adolescents were predominantly female and slightly older than in the N group. These small differences did not affect the significance of the statistical results, as can be seen from comparisons adjusted for age and gender.

Results for the adolescent patients

Both groups of adolescents reported that they felt better about the four feelings (Table 2). In the D group,

![Flow chart](image)

**Figure 1. Flow chart.**
the improvement was significantly greater on the four feelings (Table 2). The N group scored significantly higher on the feeling that the consultation met their expectations: 86 (±16) versus 76 (±22) \( (P < 0.0001) \). The D group reported a poorer health status and greater difficulty talking about their problems; they were more likely to have nobody to confide in, and they were less likely to feel understood when they did talk about their problems (Table 2).

**GPs assessment of adolescents’ well-being**

GPs underestimated how adolescents felt about their health status and this was significantly greater in the D group \( (P = 0.016) \). GPs also thought adolescents were less likely to have someone to confide in and to be understood than they were without significant difference between groups. GPs underestimated the fact that their consultation met adolescents’ expectations without significant difference between groups. No specificity linked to age was found for any of these results. The detailed comparison between GPs’ representations and adolescents’ feelings are shown in Table 3.

**Discussion**

**Main findings**

In this study including 665 French adolescents visiting their GP, all adolescents reported feeling an improvement in their physical and psychological health after the consultation. This effect was more pronounced in the D group. GPs tended to underestimate this improvement and did not assess the adolescents’ feeling on their health status accurately, especially in the D group.

**Strengths and limitations**

Our results are reliable, thanks to the number of consultations and the participation of the vast majority of the randomly selected GPs.

The main limitation of this study is the method used for splitting the adolescents into two groups. We did not use any standard instrument to explore the mental status, such as the GHQ-12, the KADS or the MADRS [20]. Rather than establishing an objective psychological diagnosis, the aim was to focus on the change in state of mind of worried adolescents, whether or not they put their worries into words, during a consultation. We analysed their state of mind mainly via their representations of where to turn for help if they had problems.
Table 3. Differences between general practitioners’ representations and adolescents’ feelings.

| Feeling good health status | N  n = 518 | Intra group P | D  n = 147 | Intra group P | Inter-group age/sex adjusted P |
|----------------------------|------------|---------------|------------|---------------|-------------------------------|
| **Adolescent**             | I feel in very poor health/in very good health | −3 (24) [-5; -1] | 0.0025* | −9 (26) [-13; -4] | <0.0001* | 0.016* |
| **GP**                     | I think that this adolescent feels he/she is in very poor/very good health | | | | | |
| **Being able to talk about problems** | | | | | |
| **Adolescent**             | I can talk about any problems I may have | 2 (25) [-1; +4] | 0.51* | 4 (26) [0; +9] | 0.080* | 0.35* |
| **GP**                     | I think that now if this teenager has a problem he/she will be able to talk about it | | | | | |
| **Having someone to confide in** | | | | | |
| **Adolescent**             | I have someone to confide in if I have a problem | −5 (22) [-7; -3] | <0.0001* | −3 (24) [-7; +1] | 0.078* | 0.27* |
| **GP**                     | I think that now if this teenager has a problem or worry he/she will be able to confide in someone | | | | | |
| **Feeling understood**     | During this consultation, I felt I was understood | −6 (19) [-8; -4] | <0.0001* | −5 (21) [-8; -1] | 0.0005* | 0.46* |
| **GP**                     | During this consultation, I think the teenager felt he/she was understood | | | | | |

Interpretation of the study results

Adolescents that were initially assigned to the D group had a more negative assessment of themselves in the four VAS questions. Our observations are in agreement with studies that have shown that adolescents having trouble also have communication deficits, in particular, towards adults [11].
The greater positive effects on the D group could encourage adolescents to turn to their GPs again in the future. This result is consistent with findings that adolescents turn more easily to help providers with whom they have had a positive experience [11].

GPs’ role in this improvement is debatable. This could occur with any formalized encounter with an adult. To analyse this point, a similar study is required involving another adult (teacher, hairdresser, etc.).

The fact that GPs do not assess their impact on adolescents correctly is an important message and has been already observed [16]. This could be explained by GPs overestimating problems and focusing mainly on somatic concerns.

After the two studies published from the same dataset [22,24], this third article bridges a gap in this research area. Qualitative literature shows that GPs can have a major role in detecting and helping adolescents with psychological issues, within specific protocols [25,26]. Therefore, our quantitative study has demonstrated something new: any GP consultation, for whatever reason can, in itself, improve the well-being in adolescents. An important reason for GPs disengaging in this area is the uncertainty about what to do and what is expected of them as primary care clinicians [27]. GPs often feel a sense of professional disempowerment: stemming from a lack of formal training and education about the clinical topic [28]. Our study shows that this feeling is very subjective. Indeed, GPs significantly underestimate their impact on immediate well-being in adolescents.

**Implication for clinical practice**

This study should encourage GPs to examine broader issues with adolescents whatever their reason for consulting.

**Conclusions**

GPs often underestimate the positive impact they have had on adolescents, who feel significantly better, especially if they have been experiencing difficulties.

**Disclosure statement**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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