

## Alcohol and Pregnancy in France: a New-survey from Internet Forums in 2009–2010

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**Abstract – Introduction:** In spite of the implementation of national policy in 2007 to educate people about the risks related to drinking alcohol during pregnancy, many women carry on drinking when they are pregnant. It seems essential to trace the history of the evolution of pregnant women's knowledge and opinions, in order to understand their attitudes towards the risks related to drinking alcohol during pregnancy and their understanding of the messages aimed at them. *Method:* A qualitative approach based on the chats of 35 pregnant women on Internet forums between September 2009 and September 2010 was carried out. *Result:* Women who shared on Internet about »alcohol and pregnancy« are younger and better educated than in previous years, which is in keeping with the development of the phenomenon of binge drinking. Even if these women are perfectly aware of the importance of total abstinence, they often drink when they first get pregnant and only stop drinking once they actually realize that they are pregnant. *Discussion:* The consequences of drinking alcohol on the unborn baby during the first weeks of pregnancy are underestimated because medical staff are not very well informed and consequently give mothers-to-be inadequate information. The development of continuous education for medical staff, that started in 2007, should remedy the situation.

**Key words:** alcohol, forum, pregnancy, binge drinking, France.

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## INTRODUCTION

In France or abroad, very few studies focus on the question of the attitudes towards alcohol during pregnancy. The last French study mobilizing a qualitative approach in three Internet chat groups in 2007 shows that the representations of women are elaborated from the perceptions of the risks taken, which depend on the women's knowledge, their level of education, their jobs, how many children they have but also on the personal experience of their own mothers. The attitudes of women from underprivileged background are based on common sense, whereas the women who are socially privileged tend to rely more on scientific research. Besides, a French quantitative study, measuring the evolution of the knowledge of women between 2004 and 2007 on »alcohol and pregnancy« brings to light that the »social standard in alcohol consumption during pregnancy seems to have evolved towards zero alcohol«.

The change in the social norm seems to explain, on one hand, the wide acceptance of the labeling of alcoholic drinks and, on the other hand, the positive effects of prevention campaigns intended both for the general public and healthcare professionals, in the wake of the vote of the Payet amendment in 2005 (Article L 3322-2 of the code of public health: all the packaging units of alcoholic drinks must carry a message of sanitary character recommending no alcohol consumption during pregnancy, respecting the conditions fixed by the French Minister of Health and Social Security). Article L 3322-2 is a complement to the measures imposed by the law of August 9th 2004 relative to national public health policies with regards to pregnant women's alcohol consumption.

In 2007, in support of these measures, INPES (National Institute for the Prevention and Health Education) made healthcare professionals (gynecologists, midwives and so on) sensitive to the effects of alcohol consumption on the fetus. INPES provided healthcare professionals with postcards for their patients, advertising Zero alcohol consumption. This awareness-raising action of healthcare professionals was continued, by information campaigns led by INPES in the medical press<sup>1</sup> and, by training courses organized by perinatal associations.<sup>2</sup>

Since 2007, the general public has also been the target of information campaigns on the prevention of fetal alcohol syndrome (FAS).<sup>1</sup> These campaigns, also implemented by INPES, take place mainly during the week of the World Day for Raising Awareness to FAS, on September 9<sup>th</sup> every year. They appear both in the national or local newspapers and magazines as well as on television. These campaigns are followed by more specific actions implemented all year round by associations such as »Alcohol Assistance« among others.<sup>2</sup> The pupils of middle schools or high schools can poten-

tially be made sensitive to the sanitary risks of alcohol consumption during pregnancy.<sup>1</sup> However, this raising awareness implemented by various associations remains exceptional and should be more widespread. In spite of raising the awareness of healthcare professionals and the information campaigns for the general public, the analysis of the contents of the discussions of the women on forums in 2007 brought to light that many of them continued to consume alcohol during their pregnancy, which confirms the results of the survey of INPES<sup>3</sup> and of the Barometer Health according to which 11% of the pregnant women declared having consumed some alcohol during the week preceding their investigation (as opposed to 38% of all the women) Inpes.<sup>4</sup>

This article aims to highlight the recent preoccupations of pregnant women expressing themselves on the internet forums in 2009–2010 with regards to their alcohol consumption during their pregnancies, knowing that information campaigns have been implemented every year since 2007, and that the awareness of healthcare professionals has been improved.

## MATERIAL AND METHOD

This qualitative study identifies pregnant women's attitudes towards alcohol consumption and their perceptions of the messages which are passed on to them to influence their behavior.<sup>3</sup> The choice of a qualitative approach was directed – as for the previous study<sup>5</sup> – towards the collection and the analysis of the »verbatim« of the pregnant women (n=35) in various stages of their pregnancy, expressing themselves on the subject of »Alcohol and pregnancy« on Internet forums between September 2009 and September 2010. Four forums (two of which had been consulted during the last study),<sup>5</sup> were consulted: a forum of medical exchanges »atoute.org«, two non-specialized forums »doctissimo.fr« and »auféminin.com« as well as a specialized forum »my grossesse.com«. The consultation of an added forum compared to the previous study can be explained by the smaller occurrence of this subject on Internet forums today. The experts' answers were not taken into account in this study because only one website, »atoute.org«, provided them. The women used pen names without tables of correspondence so they could not be traced. In this study these pen names were replaced by first names, chosen at random for data processing and analysis. The anonymity of the women was respected, the French Ethical Board approved our study, and therefore the contents of the women's chats were not required.

The corpus contains 142 messages characterized by 35 pen names. The majority of these Internet users (78%) intervened only twice on these forums, which represents a

third of the messages. The most diligent Internet users left ten messages. The size of the messages is variable, from just one line to about ten lines. Messages were written in »fluent French«, with many spelling and grammar mistakes and contain »smileys« (80%). The very frequent use of these »smileys« shows the young age of the users.<sup>6</sup>

The socio-demographic characteristics of the Internet users (age, profession, number of children, and place of residence) were specified for 60 messages either in the choice of pen name, or in the signature of the message. The age of these Internet users is specified in 38% of the messages (average age: 28 years and 8 months), and is also indicated by the quasi-systematic use of »smileys«, characteristic of the younger generations way of expression.<sup>6</sup> The profession of these Internet users is specified for 31% of them, those issued from socially privileged backgrounds are overrepresented (16/24). Most of the women (85%) were pregnant for the first time. The stage of their pregnancy is specified in almost all the messages (90%). Internet users from minorities (8%) declared that they were healthcare employees, to gain the trust of their friends and thereby be able to help them more efficiently.

The majority of these Internet users (83%) had consumed alcohol since the beginning of their pregnancy. The women had consumed alcohol either in small doses (35%) or during one or several episodes of »binge drinking« (60%). The Internet users of the non-specialized forums differ from those of the medical forums: the first ones sought to share their experiences and knowledge whereas the latter were seeking scientific information.

The discussions were analyzed with NVivo 8 Software (International QSR). Messages exchanged on these forums were the object of a thematic analysis. A thematic tree was built and showed the persistence of false information in spite of the campaigns to educate the general public, the importance of the discussions around information sources, and also the emergence of new concerns about discovering one's pregnancy late. Extracts of the discussions of the women were given uncorrected, to be true to their level of expression. The corpus was not tested against someone for financial reasons.

## RESULTS

### **False information on alcohol consumption during pregnancy**

#### *Type of alcohol (14% of inputs)*

It has to be noted that the knowledge concerning the various kinds of alcohol and pregnancy has improved among the Internet users who are socially privileged: »the

kind of alcohol makes no difference only the quantity you drink matters. In a bar, a G and T or a glass of wine or a beer contain exactly the same quantity of alcohol« (Anne-Marie, Spanish teacher, 37 Paris).

The fact remains that the majority of the Internet users and especially the younger generation think that, the various kinds of alcohol do not have the same effect on the unborn babies. They believe that only strong alcohols have negative consequences on the fetus: »Strong alcohol, is a NO NO, but Champagne, especially at this stage, no worries!« (Mathilde, 28, training assistant).

### *Acceptable alcohol consumption (27% of inputs)*

Except for abstinent women and/or women working in medical professions (12%), the recommendation for »abstinence during pregnancy« is not perceived as »not drinking at all«. For most women (33%), prevention against alcohol consumption during pregnancy concerns »alcoholics« (Violette, 31), thus freeing themselves from this excessive social constraint that abstinence represents for them. They consequently allowed themselves a few sips, once in a while : »a few sips here and there, a few drops in a glass that's not enough to be drunk« (Karine, 26, receptionist), »one light beer or a glass of wine« (Caroline) for different festive occasions such as »a wedding or the New Year« (Isabelle, 39, Toulouse); but also every day to relax and have fun: »a small drink after work sometimes with my boyfriend« (Cecile, bank executive). The discrepancy between the various consumptions of alcohol are found depending on how the educated women were (secondary school or university education), if they had already had children and if their own mothers had consumed alcohol when they were pregnant »to drink a small glass once in a while doesn't not worry me at all, it's the very excessive drinking which concerns me« (Catherine, 34, manager in human resources, 2 children).

### *Moment of consumption (38% of inputs)*

The first month of pregnancy is generally considered as a period without risk: »during the first weeks of pregnancy, your baby is not connected with you with the umbilical cord. It will survive if it is meant to, that's all« (Charlotte, 24). The non-compliance with health messages remains unacceptable for abstinent women and women pregnant with their first child and/or health professionals because of the risks incurred for the unborn babies: »Zero alcohol, nothing else will do!!! there are too many risks, it would be seriously irresponsible to do otherwise« (Marie-Thérèse, 37); »It is not so much the amount of alcohol you drink, but when you do so, because alcohol crosses

the placenta without any problem and once is enough to give birth to a ETCAF baby« (Erika, 29, music professor).

For abstinent women, pregnancy did not modify their habits: »I never drink even when I am not pregnant, I hate alcohol« (Laurence, 25, cashier). The women working in a medical profession are unambiguous as for the behavior to be adopted during pregnancy: »I am a nurse you must believe me, when you drink alcohol at any stage of your pregnancy, you take a risk for your baby« (Caroline, 24).

### **Information sources to none homogeneous messages**

#### *The internet sources (11% of inputs)*

These women have been informed of the risks relative to alcohol consumption during pregnancy and its consequences for the unborn child essentially by internet sources: »many studies written by famous doctors are available on the net, too much information makes me freak out« (Sabrina, 32, real estate agent); »I had a look at« fetal alcohol syndrome »websites« (Laurie, 27, library staff). Contrary to the previous study, no woman mentioned reading any scientific research or watching television programs that deal with scientific research.

#### *Gynecologists' contradictory messages (42% of inputs)*

The information provided by health professionals is not often mentioned by the internet users as a source of information. Most of them refer to the absence of discussion with their gynecologists about alcohol consumption »he asked me if I smoked but nothing about alcohol« (Ophélie, 35, physiotherapist). Some doctors tolerate an occasional drink »my OB/GYN told me that the recommendation »zero alcohol during pregnancy« was very recent, she didn't forbid me to drink but she advised me not to overdo it (Agnès, 31, agent of bank); »exactly ten days ago, all the midwives that I saw as well as my OB/GYN assured me that one glass of wine is not bad for my health. But just one, I should not drink more (Caroline, 38, teacher). »On December 18<sup>th</sup>, my OB/GYN explained that we must ban alcohol totally, because there are always people who can't be reasonable and if they said yes to one glass of wine, they wouldn't be able to stop (Marine, 25, commercial); »I knew about my pregnancy when I was 8 weeks pregnant, just after Christmas. And I had drunk like a fish!!! My OB/GYN said that it was not a problem (Louise, 23, assistant accountant). On the rare occasions when health professionals had very clear-cut and precise recommendations, their messages were received with suspicion by the women: »saying »zero alcohol« is just a way for your OB/GYN to protect himself. He informs you, and if you

drink too much during your pregnancy and if your baby has a problem, you cannot blame him, because he has informed you. Doctors protect themselves!« (Charline, state employee).

### *The mother, the ultimate reference (47% of inputs)*

The mothers – or grandmothers seem to be the most reliable source of information, for Internet users from underprivileged backgrounds who seem very much influenced by their mothers' experiences and refer abundantly to their past life experiences to justify their choices. Several women reported that their mothers did drink when they were pregnant with absolutely no consequences on their babies: »Your mothers and grandmothers had no recommendations about zero alcohol during their pregnancies and in France, a vast majority of the population is quite normal and doesn't have any disability« (Laura, 24, a cashier); »My mom drank half a bottle of champagne when she was pregnant, and I have no disabilities, I'm well educated and, I'm a great at sports« (Léa, 24). So, they minimize the dangers of alcohol consumption during pregnancy.

Finally, very few women spoke about the pressure of their friends or relatives urging them to stop drinking during their pregnancies: »For me, it's zero alcohol but I'm always very surprised by my relatives who urge me to drink, to have just a 'small drink', or a small glass of champagne. I always answer »no thank you, I don't drink because I'm pregnant, but there is always someone to tell me not to make such a fuss« (Aude, 32, manager of a language center)

## **Imperfect knowledge about pregnancy**

### *Late discovery of pregnancy (68% of inputs)*

Most women (54%) learnt about their pregnancy at the end of the first month. The awareness campaigns raise questions about the consequences of drinking during the first weeks of pregnancy but the women did not know then that they were pregnant. The majority of Internet users mention no relationship between the mother and her unborn baby during the first weeks of pregnancy: »during the first weeks, the baby is not connected to her mother with the umbilical cord; therefore there is no exchange between them. Therefore there's no reason to worry (Delphine, 28, sports teacher); »Drinking at the beginning of pregnancy is not serious because there is still no umbilical cord, so the baby cannot be affected by its mother« (Joëlle, 26, beautician).

Moreover, there is no agreement between Internet users about when the unborn baby is connected to its mother by its umbilical cord: »you are only 8 weeks pregnant,

the placenta is not yet formed« (Laura, age 24, cashier);«according to my OB/GYN, you must start to be careful after 4 weeks of pregnancy and not after 4 weeks of amenorrhea. He was quite definite about it.»; »the feeder link between mother and child exists only at the end of the second week of pregnancy«(Léa, 24 years, hairdresser); »the baby is not joined to you before the 5th or 6th week of pregnancy« (Séverine, 30); »my OB/GYN tells me that there is no worries before the 12th week of pregnancy, because alcohol is only a problem when the brain develops, that is during the twelfth week of pregnancy« (Pamela, 25, state employee).

The lack of knowledge about embryology explains why many women drink as they try to get pregnant:« if you drink at the very beginning of your pregnancy, your baby does not drink« (Sandra, 27). Only one woman specified that »it is best to stop drinking alcohol as soon as you try to become pregnant. Because during the first weeks, you don't know that you are pregnant... I have a friend who has a little boy with a heart defect, and that could result from her drinking!!! »(Maureen, 32, nurse).

### *The ultrasound way to ease concerns (19% of inputs)*

Concerns of Internet users about their alcohol consumption during the first weeks of pregnancy decrease after the first ultrasound. For them, the ultrasound is enough to reveal defects due to alcohol consumption. Indeed, many women think that all defects can be seen on the first ultrasound: »It is so reassuring to see the baby's heart beating...my baby is in good health, he even yawed« (Delphine, 28, sports teacher); »my ultrasound reassured me: the baby's heart was very strong, and I could even see my baby move« (Canelle, 20). These Internet users reduce the characteristics of fetal alcohol syndrome to heart function and ignore neurological consequences.

## DISCUSSION

The forums have the advantage of anonymity since pen names are widely used. Confidentiality is ensured, hence a certain freedom of expression.<sup>5</sup> Furthermore, the forums make it possible to give one's point of view freely without being judged: there is no authority in power conducting direct interviews, and there is no notion of what is politically correct. False or erroneous information can be carried by the messages because neither the information exchanged nor the profiles of the Internet users are checked. Furthermore, this approach excludes women who do not have access to Internet or who are inhibited by their difficulties with writing. Therefore, the older or socially underprivileged women, usually the women who have the most seriously af-

fectured children, tend to be underrepresented.<sup>4</sup> The forums only give a partial representation of women concerned by the issue. This implies that the points of view exchanged between the women remain an indicator, and cannot be generalized.<sup>5</sup>

The new trends of this study cannot be scientifically compared to the ones detected in our previous study<sup>5</sup> because the internet forums are different and the women who chat on these forums are not the same: Internet users exchanging views on this subject are younger and more educated than those from the previous study, which confirms the results of French, Canadian and American studies.<sup>7,8</sup> Presumably, this change of population is due to the new phenomenon of binge drinking which mainly concerns young educated women.<sup>9,10</sup> Finally, these young women play with the »boundaries« of the precautionary principle because they have a better knowledge of the risks to drink during pregnancy,<sup>3</sup> these women generally become more abstinent when they know that they are pregnant.<sup>11,12</sup>

In 2010, the preoccupation with »Alcohol and pregnancy« is less recurrent on Internet forums than in the study of 2007, suggesting either that prevention campaigns were efficient which would confirm the results of the French studies,<sup>3</sup> or that women are not really interested in the subject because prevention campaigns are no longer uncommon or striking. The discussions now focus on more specific aspects of the subject. However the subject of alcohol and pregnancy remains misunderstood by women.<sup>3</sup>

The recommendation of »Zero alcohol during pregnancy«, given via information campaigns in magazines and newspaper, seems to have convinced a large part of the French population.<sup>3</sup> Nowadays, Internet users know well that drinking during pregnancy is harmful for unborn babies, which explains their despair when they discover their pregnancy late, after they have already been drinking alcohol. Many Internet users think erroneously that drinking during the first weeks of pregnancy has no consequences on the baby because of the cord or the placenta are not yet developed, which is contradicted by many studies.<sup>13</sup> Indeed, it is now medically proved that alcohol consumption can have negative consequences on the babies' brain as early as in the second week of amenorrhea.<sup>14</sup> The development of other organs can also be very harmed by alcohol consumption early in the pregnancy: the heart from the third week and a half of amenorrhea; arms, legs and eyes from the fourth week of amenorrhea; teeth the sixth week and reproductive organs from the seventh week of amenorrhea.<sup>13</sup> Therefore, the information campaigns should definitely stress the necessity to stop drinking as soon as the women want to become pregnant. Internet users condone their alcohol consumption by arguing that drinking at the beginning of pregnancy systematically causes a miscarriage, therefore if the baby remains alive it necessarily means

that it has not been affected by alcohol. Some studies confirm that drinking alcohol results in a miscarriage<sup>14-16</sup> whereas some others state the opposite.<sup>13</sup>

As far as alcohol is concerned, there seems to be a dominant representation opposing »good drinks« (wine and beer) to »bad drinks« (hard liquor): Women, especially educated women, are well aware of how harmful every kind of alcohol is depending on the quantity and the degree of alcohol contained in the drink. Nevertheless, the idea that hard liquor is more harmful still remains alive among women.<sup>3</sup> The analysis of discussions on Internet forums shows that healthcare professionals should be more involved in these information campaigns. Indeed, many of them overlook the fact that the risks of organ malformations increase during the first week of pregnancy.<sup>17</sup> Usually, »the gynecologists don't speak about this subject with their patients. It would be better to educate them to approach alcohol consumption with mothers-to-be«. <sup>18</sup> These results are confirmed by many French studies which show that the healthcare professionals should take compulsory continuous training courses on the subject,<sup>5,17</sup> and on how to approach the subject of alcohol consumption with mothers-to-be. This would allow all healthcare professionals to give their patients the same message of prevention, recommending total abstinence from alcohol during pregnancy, or ideally, as soon as the women want to get pregnant.<sup>5,19</sup> A media controversy developed on the consequences about low alcohol consumptions during pregnancy<sup>20-22</sup> and health professionals do not agree on the subject. However, there is no doubt that total abstinence is the only safe option in order to take no risk.

Healthcare professionals can be trained on the subject of pregnancy and alcohol by associations such as REUNISAF, SAFFRANCE and GEGA or at university. The number of such training courses has greatly increased since 2007 in France. Furthermore, it would be advisable, as a precaution, to demand that healthcare professionals should systematically notify women about the risks due to alcohol consumption during the pregnancy and require that the women should sign a form confirming that they had been told about the risks. This information duty would protect healthcare professionals against the mothers who might accuse them of not having informed them about the potential dangers of drinking during pregnancy.

Besides the information given by healthcare professionals, the women's views on the risks are influenced by the experience of their own mothers. For some, these experiences take a prominent place in their attitudes and their testimonies give little credit to the recommendations of health care professionals which they consider unrealistic or based exclusively on theory and not on reality. This is mostly so among women who are socially underprivileged, which is confirmed by the results of a Canadian study.<sup>23</sup> Several women reported that their mothers did drink when they were preg-

nant, with absolutely no consequences on their babies, which explains their underestimation of the risks.

Awareness campaigns should be implemented to educate the mothers of pregnant women and more generally, all mothers of childbearing age. These campaigns should focus on the positive consequences of being well informed for the women and their babies.<sup>24</sup>

None of the women spoke about the information they should have theoretically received at school when they were younger, since such information campaigns began in 2006. Therefore, it would be essential to intensify efforts to raise awareness among students about these risks so as to enable the new generations of mothers to pass on their knowledge to their future daughters.

## CONCLUSION

The analysis of discussions on internet forums in 2009–2010 concerning the consumption of alcohol during pregnancy shows that the message »Zero alcohol during the pregnancy« is now well known by Internet users even if debates still take place concerning the moment and the level of consumption.

Nevertheless, a new preoccupation appears concerning the consequence of alcohol consumption when the pregnancy is discovered late. This report needs to be seen in the light of the development of »binge drinking« among the younger women. The discussions show that this question is still misunderstood especially because the recommendations of gynecologists are contradictory. The mothers remain therefore the most credible source of information. These results suggest that new orientations should be given to information campaigns which should also target healthcare professionals and the mothers of the pregnant women.

## ALKOHOL I TRUDNOĆA U FRANCUSKOJ – NOVO ISTRAŽIVANJE S INTERNETSKIH FORUMA 2009–2010

**Sažetak** – Uvod: Usprkos primjeni nacionalne politike 2007 da se ljudi educiraju u vezi problema povezanih s pijenjem alkohola tijekom trudnoće, mnogo žena i dalje nastavlja piti dok su trudne. Čini se presudnim ispitati povijest evolucije znanja i mišljenja trudnica, da bi se bolje razumjelo njihove stavove prema rizicima povezanim s pijenjem alkohola tijekom trudnoće i njihovo razumijevanje poruka koje su im upućene. Metoda: Primijenjen je kvalitativni pristup, baziran na komentarima 35 trudnica na internetskim forumima između rujna 2009 i rujna 2010. Rezultati: Žene koje su raspravljale na internetu o »alkoholu i trudnoći« su

mlađe i bolje educirane nego prethodnih godina, što je u skladu s razvojem fenomena pijenja na mah. Čak i kada su te žene potpuno svjesne važnosti totalne apstinencije često piju neposredno nakon što zatrudne i prestaju piti tek kad zaista shvate da su trudne. Rasprava: Posljedice pijenja alkohola na nerođeno dijete tijekom prvih tjedana trudnoće su potcijenjene, jer medicinsko osoblje nije najbolje informirano, pa budućim majkama daju neadekvatne informacije. Razvoj kontinuirane edukacije za medicinsko osoblje, s kojim se počelo 2007, trebao bi korigirati to stanje.

**Ključne riječi:** alkohol, forum, trudnoća, pijenje na mah, Francuska

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