Challenges for public policies aimed at adolescence and youth based on the National Scholar Health Survey (PeNSE)

Abstract  Objective: to examine the problems and challenges facing implementation of policies for Brazilian adolescents, on the basis of narrative review of the findings of the National Survey of School Health (PeNSE). Methods: theoretical policy analysis based on narrative review of the three editions of the PeNSE. The articles identified were categorised by priority issues for public policy intervention. Results: cigarette smoking held stable, while use of other tobacco products increased by 18%. Regular alcohol use declined from 27.3% (2009) to 23.2% (2015). Drug experimentation increased, while family supervision produced protective effects against tobacco, alcohol and drug use. All indicators of violence increased, including involvement in fights where someone used a firearm or melee weapon. Diet and physical activity displayed predominantly unhealthy habits: (only 20% exercised for an hour or more daily). Sexuality: condom use at first intercourse decreased from 75.9% to 66.2%. Half the students had used a health service in the prior 12 months. Conclusion: exposure to risk factors, including alcohol, unsafe sex and violent behaviour and conditions, is high in adolescence, making it important to adopt public policies and inter-sectoral actions that are plural and open to singularity in order to protect the health of adolescents and youth.

Key words  Adolescence, Adolescent health, Risk factors, Violence, School children
Introduction

Adolescents undergo important biological, cognitive, emotional and social changes. At this stage of life, they experiment with new behaviour and experiences, some of which are health risk factors, such as smoking, drinking, poor diet and sedentarism. These risk factors are associated with development of noncommunicable chronic diseases (NCDs), accidents, violence, sexually-transmitted diseases and others. Knowing how schoolchildren live and behave makes it possible to gauge the magnitude and distribution of important health risk factors in adolescents and youth in various respects. Monitoring adolescent health is an important public health strategy and the WHO recommends epidemiological surveys at this stage of life with a view to ascertaining conditions of health and life and supporting public policymaking.

Aiming to furnish the country information on adolescents, in 2009 the 1st national survey of adolescent health at school (1ª Pesquisa Nacional de Saúde do Escolar, PeNSE) was launched. Two subsequent editions were conducted in 2012 and 2015. The main goals of the PeNSE are a) to serve as input for surveillance of, and protection against, chronic disease risk factors in Brazil, b) to monitor for, and protect against, risk factors for the health of Brazilian schoolchildren and c) to identify priority issues for policymaking directed to promoting adolescent health.

The survey’s target public are students at mainstream schools, an environment with major influence on individual formation and especially well-suited to risk factor monitoring and protection, as well as for health promotion measures. The strong presence of primary and lower secondary students at school in Brazil justified conducting this survey in that setting.

This study examined the main problems and challenges facing implementation of public policies for Brazilian adolescents on the basis of narrative review of the findings of the PeNSE.

Methodology

In order to identify the main problems and challenges facing public policymaking for adolescents, a narrative review was made of studies of the PeNSE published from 2009 to 2017. The PeNSE is a sample survey conducted by the official statistics agency, IBGE, under an agreement with the Ministry of Health and with support from the Ministry of Education. Its target-public is students enrolled in and attending mainstream schools.

Data on the subject were collected by literature search in the Bireme data base using the descriptors adolescentes [adolescents], escolares [schoolchildren], promoção da saúde [health promotion], fatores de risco [risk factors], Pesquisa Nacional de Saúde do Escolar, PeNSE [national survey of school health, PeNSE]. The revision of scientific production on the three editions of the PenSE (2009, 2012 and 2015) identified 51 articles and three thematic reports. Of these, 34 addressed the study categories: alcohol, tobacco and drug use (eight), diet (six), physical activity (four), overweight (two), accidents, driving, violence and bullying (thirteen), health service use (one), oral health (three), risk factors (seven), other factors, such as asthma, race/colour, work (one).

These thirty-four articles were selected and categorised into seven major result groups, by fundamental issues for analysis of public policies in support of this age group, as follows: a) tobacco use, b) alcohol use, c) psychoactive substance use, d) accidents and violence, e) sexuality and information at school, f) diet and physical activity and g) health service use.

From these results, the aim was to highlight and discuss measures introduced by key public policies produced by the State and the gaps and challenges regarding adolescent health. For such, theoretical approaches proposed by Ball for the health policy analysis field were also applied to this end. These build on an understanding that goes beyond outcomes, to consider policy also as text and discourse, which complement and are implicit in each other and through which policies operate and consensuses and conflicts occur in contexts involving influences, the production of texts and practices.

Results

In relation to diet, narrative review identified a predominance of unhealthy eating habits, including high proportions of consumption of confectionery (41.6%), soft drinks (26.7%) and ultra-processed savouries (31.3%), on five or more days a week, in addition to low consumption of healthy foods, such as fruits (32.7%) and vegetables (37.7%). Beans are consumed by 60.7% of schoolchildren on five or more days a week, but the percentage is declining (Graph 1).
Levels of physical activity held steady between 2012 and 2015, with about one fifth of schoolchildren reporting one or more hours of physical activity daily. About one half of schoolchildren engage in two or more hours of physical activity daily at school.

Cigarette smoking in the prior 30 days remained unchanged over the two most recent editions of the survey, at 5.0% (2012) and 5.6% (2015). However, use of other tobacco products grew from 4.8% to 6.1%. Taking cigarette smoking together with use of other tobacco products, prevalence can be seen to increase by 18% – from 7.6% (2012) to 9.0% (2015). This can be explained by the habit of water pipe smoking, which accounts for about 70% of “other products”, followed by hand-rolled cigarettes (13.6%)\(^8,9\) (Graph 2).

The 2015PeNSE also indicated increased experimentation with drugs and showed that regular alcohol use, although at very high levels and predominating among girls, decreased from 27.3% (2009) to 23.2% (2015)\(^10\).

Malta et al.\(^11\), in an analysis of factors associated with alcohol use, found that schoolchildren’s consumption in the prior 30 days was independently associated with: being 15 years old or more (OR = 1.46), being female (OR = 1.72), having white skin colour, having mothers with more schooling, attending private schools, having tried tobacco (OR = 1.72) and drugs (OR = 1.81), using tobacco regularly (OR = 2.16) and having had a sexual relation (OR = 2.37).

Family-related risk factors included missing school without parents’ knowledge (OR = 1.49), parents’ not knowing what their children do in their free time (OR = 1.34), children eating fewer meals with their parents (OR = 1.22), parents reported to be unconcerned (OR = 3.05) or little concerned (OR = 3.39) if children come home drunk, and children having suffered domestic violence (OR = 1.36).

PeNSE data indicate that it is important for families to play their role of care and supervision and that family practices are protective against psychoactive substance use. Malta et al.\(^12\), in multivariate analyses of the PeNSE (2012), showed a negative association with (or protection against) substance use by behaviour such as living with parents, eating meals together and parental su-
Supervision. Living with parents reduced tobacco use (OR = 0.83), alcohol use (OR = 0.92) and drug use (OR = 0.84). A protective effect was also produced by eating meals with the family 5 or more times a week, which showed an association with lower use of tobacco (OR = 0.67), alcohol (OR = 0.75) and drugs (OR = 0.61). Parental supervision (parents’ knowing what their children do in their spare time) reduced use of tobacco (OR = 0.49), alcohol (OR = 0.60) and drugs (OR = 0.63)\(^{11}\). The survey thus pointed to a protective effect of family supervision towards lesser use of tobacco, alcohol and drugs\(^{11}\). On the other hand, parents who do not know what their children do in their spare time, or who exercise little supervision, increased the likelihood of use of tobacco (OR = 2.69), alcohol (OR = 1.98) and drugs (OR = 1.79) \(^{11}\) (Graph 3).

Studies indicate that features of schoolchildren’s mental health, such as loneliness and insomnia, associated positively with use of tobacco, alcoholic beverages and illegal drugs. Not having friends was associated positively with use of tobacco and illegal drugs, and negatively with alcohol use\(^{12,13}\).

The 2015 PeNSE also revealed a reduction in condom use at first sexual relation by 9\(^{th}\)-year schoolchildren, from 75.9\% to 66.2\% (Graph 4). This makes it still more important that the school give guidance on condom use. The IBGE (2106)\(^{6}\) showed that 72.3\% of public schools and 56.7\% of private schools offered guidance to their students on condom use and the free availability of condoms at health services. Schoolchildren who have not received guidance at school on contraception and prevention of STDs are more likely to engage in sexual relations without using condoms (OR = 1.87)\(^{14}\).

In 2015, the indicators used to monitor risk of accidents and violence among adolescents showed increases. Driving increased from 18.5\% of respondents in 2009 to 24.8\% in 2015, with almost twice as many boys driving as girls. Being driven in a motor vehicle by someone who had consumed an alcoholic beverage in the prior 30 days increased from 18.7\% (2009) to 25.4\% (2015), and was more than twice as likely among the boys, heightening the risk of traffic accidents involving adolescents (Figure 1). The prevalence of adolescents who missed classes for lack of

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**Graph 2.** Use of any tobacco product, cigarettes and other tobacco products by Brazilian schoolchildren, PeNSE, Brazil, 2012 and 2015.
safety on the way from home to school increased from 6.4% (2009) to 12.8% (2015). Adolescents who missed classes because of lack of safety at school increased from 5.5% (2009) to 9.3% (2015). Involvement in fights where a firearm was used rose from 4.0% (2009) to 5.6% (2015). Involvement in fights where a melee weapon was used rose from 6.1% (2009) to 8.2% (2015).

Oliveira et al., in an analysis of health service use data, showed that half of schoolchildren had reached out for health services in the prior 12 months. The determinants were similar to those observed in health service use by adults: socioeconomic position, being female, white, attending a private school and the mother’s having 12 years or more schooling.

Service use was greater among females, the associated factors being white skin colour, attending a private school, having a mother with 12 years schooling or more, having had sexual relations, suffered injury or toothache, tried to lose or gain weight, wheezing in the prior 12 months, appropriate hygiene habits, and parents’ knowing what their children do in their free time. Reaching out for Health services was also higher among females, and was associated with better socioeconomic position, presence of symptoms and risk/protection behaviour. Another determinant of greater health service use was family supervision (parents’ knowing what their children do in their free time).
Discussion

The data of the three editions of the PeNSE reveal the importance of epidemiological surveys in monitoring the health of specific population groups\textsuperscript{16}. The PeNSE enables goals to be monitored in relation to tobacco use, obesity, physical activity and alcohol use, as well as other risk factors for schoolchildren’s health. For that reason, Brazil has become an international reference for

\textbf{Figura 1.} Indicators of traffic violence, prevalence of driving, and prevalence of being driven by someone who had drunk alcoholic beverage, in prior 30 days, PeNSE, Brazil, 2009 to 2015.
the WHO, PAHO and other countries in organising surveillance of non-communicable diseases and conditions.

Narrative review of the PeNSE highlighted the importance of universities using research when analysing health problems at schools, as well as when deploying that content in capacity-building for health personnel.

Between 2003 and 2015, the use of population surveys to support evidence-based policymaking became established in Brazil. The findings of the PeNSE and the 2013 National Health Survey (Pesquisa Nacional de Saúde, PNS), for example, guided regulation of the Anti-Tobacco Law, including the presidential decree on tobacco-free environments, increased taxation and establishing of minimum prices for tobacco products, the inter-ministerial order extending the regulations to waterpipes and prohibiting them in tobacco-free environments, in 2014. It is fundamental that these measures be maintained in order to secure the advances they have fostered, such as inspection of tobacco-free environments, vigilance towards new product trends and fashions, as with waterpipes, especially among adolescents and young people. Preventing or delaying first tobacco use among youngsters is a public health goal.

The PeNSE has also constituted an important social communication instrument, in that it has afforded a broad panorama of schoolchildren’s health, supporting public policymakers in communicating on health promotion and education issues and media diffusion. Alcohol is consumed regularly by about one quarter of schoolchildren, while half of adolescents declare having tried alcohol. These data draw attention to the need to regulate and oversee beverage sales to minors, control sales points and restrict opening times, as well as advancing in regulating beer advertising.

They also underline the responsibility of the family and its protective role against substance use. Family supervision reduces use of alcohol, drugs and tobacco. Protective practices – including family supervision, knowing where children are, caring about what they do and who they mix with, establishing bonds of affection and dialogue, eating meals together, living with children—all protect and educate adolescents, and should be encouraged.

The PeNSE indicates the problem of sugary confectionery and beverages, which can contribute to higher risks of overweight and NCDs. Consumption of fruit and vegetables, which are protective factors against cardiovascular diseases and type II diabetes, is still low in this age group. Consumption of beans, meanwhile, although high, had decreased in 2015. Accordingly, it is fundamental to develop policies that take as their yardstick the Dietary Guidelines for the Brazilian Population, which contains information, analyses, recommendations and guidelines on choosing, preparing and consuming foods and also serves as an instrument of food and nutrition education for promoting the health of individuals, families and communities. Strategies such as the Plan to Reduce Sodium in Processed Foods and stressing the value of regional foods, which is designed to reinstate, revalue and strengthen Brazilian dietary culture, are important health promotion tools. Endeavours to address overweight and obesity demand, in addition to physical and leisure time activities, food and nutrition education measures in both schools (beyond guaranteed supply of healthy foods in school meals) and the public health care system. Fundamental in this connection is to restore, value and strengthen sustainable agriculture, which respects local knowledge and defends biodiversity, and to recognise the cultural heritage and historical value embodied in foods.

Physical activity is an important factor in reducing NCDs. Worldwide more than 80% of adolescents from 13 to 15 years old do not engage in physical activity to minimum recommended levels, given the large amount of time spent in front of the television, on mobile phones, video-gaming, the restriction of leisure options resulting from mounting urban violence and the lower number of physical education classes in schools. There is growing concern over reforms of upper secondary schooling and the non-compulsory nature of physical education classes in Federal Law No. 13.415 of 2017, which tends to aggravate this scenario. This challenge demands an intersectoral approach in which the health, education, sport and culture fields can set up community spaces, such as “health gyms”, for collective activities in the various territories.

Girls participate less in drink-driving (14.1% against 36% of boys), but that difference practically disappears when what is considered is being in a vehicle with a driver who has drunk an alcoholic beverage (25.1% girls and 25.7% boys). Accordingly, prevention-related communication strategies should target boys and girls with a view to problematising the risk associated with drink-driving and the consequences of traffic accidents associated with drinking.
The 2016 Violence Mapping reveals homicides to be the most serious issue for Brazilian youth, and the main cause of death among 16 and 17 year olds. Between 1980 and 2013, murders in this age group increased by 640.9%, from 506 to 3,749 deaths. Meanwhile, homicides also increased from 9.7% to 46% of total deaths, growing by 372.9%\(^{35}\). However, the vast racial inequality in the data deserves careful consideration, given that nearly three times more black adolescents were killed: 66.3 per 100,000 as opposed to 24.2 whites. Unfortunately, there is nothing to indicate any reversal in this extreme selectivity of death for reasons of colour\(^{3}\).

Firearms continue to kill mostly males (94.4%) and 58% of those deaths occurred in the population from 15 to 29 years of age. This situation of extermination of poor, young blacks living primarily in peripheral areas of large cities has been invisible to most of Brazilian society and the authors of that violence go largely unpunished. In many situations, the murderers are agents of law and order, heightening still further the sensation of insecurity that accompanies poor, black youth of the peripheries. In the São Paulo municipal area alone, the police are estimated to be responsible annually for 500 to 600 deaths, which are hardly investigated. That is greater than the total number of deaths attributable to agents of the State during the military dictatorship\(^{2}\).

Another challenging issue for public policies is psychoactive substance use. There are established consensuses, among certain fields that deals with this issue, that any policy designed to reach beyond the walls of repression, so as to be really care-centred, must focus on the person using the psychoactive substance, rather than the drug itself. On that view, bonding, social ties, the possibility of encountering the others, come to be central to the care perspective\(^{35}\). Such thinking aligns with the PenSE data, which indicate that social groups (family or friends) that foster encounters, affection and bonding have a protective effect against drug abuse.

However, it is important not to naturalise the family’s protective role. Policy making for this population has to understand the disputes enmeshing the actors involved\(^{44}\). Many girls and boys that today find themselves on the streets, major social vulnerability, abusive use of alcohol and other drugs, come from family environments where their rights were violated, domestic violence and sexual abuse where experienced.

In setting up a network of specific care, the school plays a very important role, because of its preparedness for qualified listening, for embracing situations of suffering and recognising warning changes and situations of risk. Stronger, more supportive, individual bonding has produced more substantive effects than the ineffective, traditional strategy of the war on drugs based on alarmist discourse and slogans that arouse curiosity, but without producing any protection. The focus of any action by family, school and health system should be not the drug, but the adolescent or young person and their needs, and that is a key challenge for intersectoral policies coordinated by health and education. In other scenarios, the school itself produces violence in situations of prejudice, bullying and discrimination. There are commonly those who, when observing middle-class young people who use crack, point to the drug as the factor de-structuring the (sometimes idealised) family, without raising any questions as to the nature and quality of the bonds it is a substitute for\(^{35}\).

It is thus fundamental to stress the importance of policies and strategies centred on producing bonding and willingness to share in another’s history, suffering and experiences, as well as respect for other manners of producing a life. Endeavours in this regard, by investing in harm reduction and specific, individual care, demonstrate the power of policies in this direction, which deploy coordinated education, social assistance, sports and cultural measures with a view to protecting and heightening the value of life. In the Rowing for Life project (Projeto Remando para Vida) in São Bernardo do Campo, São Paulo, for example, boys and girls, under the care of a child and juvenile alcohol and drugs psycho-social care centre, practice rowing on the Billings Reservoir and help to maintain an environmental project by collecting refuse, in a strategy associated with construction of a care network with very substantial effects in reducing the place of drugs in these young people’s lives. Endeavours of this kind, which invest in greater autonomy and comprehensive care for adolescents and young people, should be encouraged\(^{36}\). The Open Arms programme (De Braços Abertos, DBA), in the municipality of São Paulo, is another endeavour designed to provide care on a harm-reduction basis: 64% of users reported spending whole days under the influence of drugs before entering the DBA; after a time in the DBA, 54% reported spending little time under the influence of drugs\(^{37}\). Those who spend little time under the effect of drugs are able to care of themselves and of others, to work and to feed themselves, in
short, to see to their lives. This has proven pow-

erful in prevention and care strategies for people

who abuse drugs.

It is also important to look carefully at
drug-traffickers’ use of children and adolescents. Study with children and young people involved in the drug trade in Rio de Janeiro indicate how important the lack of social prospects is in these young people's entering and remaining in that situation, more so than poverty and social exclu-
sion. The prospect of social ascension represent-
ed by a “career” in the drug trade consists in a
temporary livelihood, but also occupies a space
of future, prospects and desire. It is another sit-
uation that calls for an intersectoral approach,
one that challenges schools, families and commu-

nities to offer other opportunities for these young people.

The decrease in condom use in the study pop-
ulation, from 75.9% to 66.2%, places sexuality at
this stage of life at the centre of the debate. This
broad topic, which can be addressed on different
approaches, is examined here in two aspects. One
first concern is the possibility of pregnancy in
adolescence. A number of studies have addressed
pregnancy as a possible cause of adolescent girls’
leaving school and highlighting the medical and
social risks associated with that situation. In many
girls’ lives, this experience becomes a manner of
reconstructing their place in society, gaining so-
cial mobility and advancement, new standing in
the community, and even as leveraging school
life, which grows in importance. Far from glam-
orising teenage pregnancy, there is a need not to
naturalise the place of these phenomena in young
people's lives and to recognise the importance of
listening, being open to the different meanings
that may be present in different contexts and life histories. The openness to dialogue and to
understanding that there are many worlds being built beyond the normalisation of life.

Another aspect of sexuality to be considered
is the focus to the many situations of prejudice
and violence that adolescents and young people
are exposed to in the school environment when they experience a non-heterosexual orientation,
often aggravated, in many cases, by adults’ inabil-
ity to embrace and value the plurality of sexual
orientations experienced by pupils. Having
to silence and conceal their sexuality is another form of violence for young people, often with the
complicity of teachers, who avoid discussing the
subject of sexual and gender diversity in schools
or exclude it from the curriculum, even in sex ed-

ucation classes.

Health promotion and measures to combat
the various expressions of violence against ado-
lescents and young people need to consider the
issues raised here. They will be effective only if
supported by intersectoral policies able to pro-
duce responses that also aim to confront sexual
exploitation and trafficking of children and ad-
olescents, disarmament, reduction of traffic acci-
dents (pedestrians being run over, accidents with
bicycles, motorcycles and other vehicles), and
structure and implement national plans to ad-
dress sexual violence against children and young
people, against black youth and the young LGBT
population. These problems that form part of
youngsters’ daily lives, in practice, in their differ-
ing life settings, need to enlighten public policies
directed to this population, so as to stress the
urgency of aligning them with the intransigent
defence of life.

The recognition that the pattern of health ser-
vice use by adolescents is no different from that
of the general population contradicts the current
discourse that this segment does not turn to the
system for health care. On the contrary, it chal-

lenges policymakers and health teams to rethink
the care production strategies in place, which
perpetuate the present model of care (centred on
disease, appointments and procedures) and thus
do not favour bonding, longitudinal relationships
and continuity of care, sanitary accountability,
autonomy and new ways of living life. Analysis
of public policies for adolescents and youth is an
important component of self-reflection with the
ability to mobilise those who thereby act on their
own actions, so as to break with the practice of
care that expropriates people of their knowledge
and to recognise users’ leading role in construct-
ing their own therapeutic plans. Unless they are
enabled to take over control of their lives – and
their health – it will be impossible to intervene in
the problems and challenges identified from the
results of the PeNSE.

One major concern is that the federal bud-
get earmarked for public policy expenditures has
been frozen for the coming 20 years by Consti-
tutional Amendment 95 of 2016. This will have
considerable impact on intersectoral policies
involving measures in health, education, nutri-
tion, sports, culture and leisure, and other ar-

eas of fundamental importance to building the
conditions necessary to address the main NCDs
and their risk factors. Even though movements
of resistance to this move are emerging all over
Brazil, some very potent, led by young people
themselves, there can be no denying the harm-
ful impact that this New Fiscal Regime will have on the health of adolescents and young people throughout Brazil.

In addition, incalculable other measures are being taken by the Temer government, such as the recent changes made to the National Primary Care Policy, incentives for expanding the supply of clinics and “popular” health insurance plans, which are restrictive, directed to appointments and low-cost procedures, and framed by the market with no State regulation or guarantee of comprehensiveness – and obviously giving no priority to intersectoral and health promotion actions to contemplate the problems and challenges examined here.

The constraints and challenges facing policies for adolescents and youth will not be better understood or resolved on the basis of better management or by structuring them in stages. Agenda-setting does not in itself guarantee the hoped-for results. Implementation of such policies, using evaluative elements very well captured by the PeNSE, is characteristically a process of interaction among a diversity of interest groups, mediated by institutionalities and by the issues raised by the practical context, which permanently reformulates the policy itself and renders it increasingly complex.

Final remarks

In addressing school and adolescents, the PeNSE recognises the risk and protective factors affecting schoolchildren and yields evidence to orient public policy implementation and monitoring of changes and trends. An understanding of the world of Brazilian adolescents can inform many intersectoral policies directed to this public. However, this study indicates how important it is for any examination of PeNSE data to be open to differences, singularities and pluralities, which should be constitutive of the human experience and central to any public policy. Programmes and actions should consider the health of Brazilian youth as a priority for all public policies. Monitoring strategies, such as the PeNSE, are essential to setting priorities and evaluating the policies introduced.

The reduction of inequities and poverty, expansion of opportunities for all and action on determinants and conditioning factors continues to be an agenda of fundamental importance to the health of adolescents and youth. More effective policies should be introduced, for example, to strip the violent deaths of their invisibility, to curb impunity and confront the extermination of poor, black youth in Brazil, giving rise to what could be called “policy as processes and consequences”. To guarantee that adolescent health enters effectively onto the national health service agenda at all levels of government, mobilising policymakers, health workers, social movements and organised civil society.

It is extremely important to promote measures through intersectoral partnerships, mobilise integrated and coordinated resources, efforts and actions, as well as to advance in health communication and education by means suited to the new times, considering especially the connection with the interests and potentials displayed by young people.

There is concern, however, for the sustainability of health promotion measures, as well as the provisions produced by intersectoral collaboration for adolescents and youth, particularly in view of the budget cutbacks scheduled under Constitutional Amendment 95 of 2016 and the measures being implemented to the detriment of the national health service.

Public policies are projects for disputing the world. In the case in question, the health of adolescents and young people, a dispute for the future we want for Brazil.
Collaborations

AAC Reis, DC Malta and LAC Furtado worked on the design, design, methodology, writing, critical review and approval of the final version of the article.

References


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