

violence prevention the evidence

Preventing violence by developing life skills in children and adolescents

Series of briefings on violence prevention

This briefing for advocates, programme designers and implementers and others is one of a seven-part series on the evidence for interventions to prevent interpersonal and self-directed violence. The other six briefings look at reducing access to lethal means; increasing safe, stable and nurturing relationships between children and their parents and caregivers; reducing availability and misuse of alcohol; promoting gender equality; changing cultural norms that support violence; and victim identification, care and support.

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Overview



Violence among children and youth is a public health problem, worldwide.

Every day, worldwide, an estimated 227 children and youths (age 0–19 years) die as a result of interpersonal violence, and for each death many more are hospitalized with injuries. Poor social skills, low academic achievement, impulsiveness, truancy and poverty are among the factors that fuel this violence.

This violence can be prevented by developing the life skills of young children.

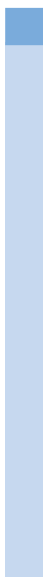
Life skills are cognitive, emotional, interpersonal and social skills that enable individuals to deal effectively with the challenges of everyday life. Evidence shows that preschool enrichment and social development programmes, which target children early in life, can prevent aggression, improve social skills, boost educational achievement and improve job prospects. These effects are most pronounced in children from poor families and neighbourhoods. The benefits of high-quality programmes of this type can also be sustained into adulthood.

Programmes for older children and youth also improve behaviour.

The effects of academic enrichment programmes, incentives to complete schooling and vocational training programmes on violence prevention demand further research, though studies have found some positive effects. These may be short-lived, however, and some programmes for adolescents have even shown detrimental effects.

Further research is needed to improve our knowledge of the effects of life-skills programmes, particularly in developing countries.

Most research on life skills programmes has been conducted in high-income countries, particularly the United States of America. More evidence is needed on the impacts of preschool enrichment and social development programmes in low- and middle-income countries. Although evidence for the violence prevention effects of other types of programmes is limited, vocational training has been shown to improve employment prospects – most significantly in low- and middle-income countries.



- **Incentives for youths to complete education**, including financial incentives for young people to attend and complete school and pursue higher education; and
- **Vocational training for underprivileged youths** to increase their chances of finding employment and divert them from crime.

In practice, these types of programmes often overlap. For example, preschool enrichment and social development programmes are frequently combined in interventions for young children (7), while interventions targeting adolescents can include both academic enrichment and incentives for completing education (8).

Of the five programme types, the evidence for preschool enrichment and social development programmes is by far the most robust, with high-quality studies associating these early interventions with reduced aggressive behaviour and vio-

lent crime in childhood and later in life. Evidence for the effectiveness of academic enrichment, incentive and vocational training programmes, however, is currently limited; few rigorous studies have measured the impact of these intervention types on violence, and existing studies show mixed results. For all programme types, the vast majority of studies have been done in high-income countries, with the evidence base dominated by studies in the United States. Despite this, life skills interventions are used throughout the world to improve young people's life chances through increasing educational participation (e.g. preschool programmes [9]) and employability (e.g. vocational training [10]). While international evidence of the impacts of life skills programmes is developing, robust studies evaluating their transferability to, and violence prevention effects in, different settings are much needed, particularly in low- and middle-income countries.

2. Preschool enrichment programmes

BOX 2

Two long-term evaluations of preschool enrichment programmes

High/Scope Perry Preschool Enrichment study

This randomized controlled study, from 1962–1967, targeted African-American children, aged 3–4 years, living in deprived areas of Michigan in the United States and followed participants into adulthood. The study group had 58 preschool participants; the control group had 65. Those in the study group had daily, morning classroom sessions with weekly home visits. The curriculum applied social learning theory to children’s play, with teachers promoting skills including decision-making, language development, problem-solving, empathizing and dealing with conflict. By age 40 years, participants showed significantly lower lifetime levels of arrest for violent crime than those in the control group (32% versus 48%). Other benefits associated with the programme included higher achievement in school and increased earnings (11).

Chicago Child-Parent Center (CPC) study

The CPC programme targets children aged 3–9 years in deprived areas, providing preschool enrichment followed by ongoing educational and family-support when children enter formal education. The preschool programme includes daily, three-hour classroom sessions, including skills development in language, arts, reading and mathematics. An intensive programme also engages parents in school activities and provides educational and health services. The Chicago Longitudinal Study has followed a cohort of children who were enrolled in CPC between 1985 and 1986, and a control group – in all, 1539 individuals. By 18 years, those who had participated in the preschool programme showed significantly lower levels of arrest for violent offences than did members of the control group (7% versus 14%) (13). By 24 years, those who had remained in the programme for longer periods were less likely to have been involved in violent crime (19). Participation in the preschool programme was also associated with lower levels of child maltreatment (14).

Preschool enrichment programmes attempt to prepare children for school by providing them with academic and social skills at an early age, thus increasing their chances of educational and social success (2). The content of such programmes is diverse and can range from language development to raising self-esteem, problem-solving, empathy and the development of literacy and numeracy skills (11). While preschool enrichment programmes can be delivered to all children within a school catchment area (universally) (12), they are often targeted at children in low-income neighbourhoods who are

considered at-risk of low academic achievement. There is strong evidence from studies in the United States (Box 2) that high quality programmes targeting deprived populations can have long-term positive impacts on participants, such as reducing involvement in violence and improving educational and employment outcomes (7,11,13–15). Combined with parenting programmes, these have also shown positive impacts in protecting children from child abuse (14).

The evidence base for universal preschool programmes is less robust; however, findings suggest

that universal preschool enrichment can reduce aggressive behaviour and increase educational attainment in the short term (7,16). One example is Al's Pals, a universal prevention programme that supports the development of social and emotional skills in children (aged 3–8 years) in preschool and elementary school. Parental education is also a part of the programme. Evaluation of Al's Pals, as implemented in Virginia in the United States, suggests that it prevents the development of aggressive and antisocial behaviour and improves coping skills and social and emotional competencies in children in participating classrooms (compared to children in control-group classrooms (17)). In Argentina, approximately 175 000 additional preschool places were created between 1993 and 1999 to increase school attendance in children aged 3–5 years. This expansion of universal preschool education was assessed in a cohort study and was associated with increased educational attainment and positive effects on behavioural measures, including attention, effort and discipline (18).

Preschool enrichment forms an important part of broader child and parent programmes implemented throughout both the United Kingdom (Sure Start) and the United States (Head Start/Early Head Start). In the United States, Head Start programmes target children and parents from low-income families, providing preschool enrichment for children together with health screening and referral, nutritional advice, parental activities and other support services. A randomized controlled trial of the Early Head Start programme (for children aged 0–3 years) found that, compared to children in the control group, participating children were rated by their parents as having lower levels of aggressive

behaviour at age three years (20). In England, the Sure Start programme provides similar services to all children living within areas served by a Sure Start Children's Centre, with the aim of providing all children in the country with access to Sure Start services by 2010. An evaluation of Sure Start programmes compared 5883 three-year-old children and their families from 93 disadvantaged Sure Start areas with 1879 children and families from 72 similarly deprived areas participating in the Millennium Cohort Study. The study found better social development and more positive social behaviour in children from Sure Start areas (21); however, effects on aggressive behaviour have not yet been measured.

A range of cost-benefit analyses of preschool interventions have suggested that high quality, well-implemented programmes targeting at-risk children can yield important economic returns (7,22,23). For example, a meta-analysis of studies on early childhood education for three- and four-year-olds from families with low incomes conservatively estimated an average benefit of \$2.36 for every dollar invested, based on impacts such as reduced crime, child abuse and neglect and expected changes to lifetime earnings (22). Longer-term follow-up of effective preschool programmes strengthens the evidence of their cost-effectiveness. For example, follow-up studies indicate that the benefits of the Perry Preschool programme (Box 2) were about \$8.74 per dollar invested by the time participants were 27-years-old. By the time they were 40 years, however, the programme's return on investment was an estimated \$17.07 per dollar invested, as criminal justice savings and earnings benefits were greater than expected (11,23,24).

3. Social development programmes

BOX 3

Promoting Alternative Thinking Strategies

PATHS is a social development programme that targets children from kindergarten to grade 6 (ages 4–12 years). Initially developed in the 1980s for deaf children in the United States, PATHS has been adapted in Australia, the United Kingdom and other countries as both a universal and targeted programme (for children at high-risk of antisocial behaviour). The core curriculum contains six volumes of lessons delivered over five years with three main units: readiness and self-control; feelings and relationships; and interpersonal, cognitive problem-solving (38). The curriculum is supported by teacher-training, teaching materials and resources for parents. A randomized controlled trial of the Fast Track programme in school children (grade 1, aged 6–7 years) in the United States examined the use of the PATHS curriculum delivered both universally and as part of a package of measures targeted at high-risk children. The trial followed 7560 children, of whom 10% were identified as being at high risk of long-term antisocial behaviour. A slightly modified version of the PATHS curriculum (80% of lessons were drawn from the published curriculum) was delivered to all children in classrooms receiving the intervention, with an equal number of classrooms acting as the control group. In addition, the high risk children received measures including academic tutoring, parent training and home visiting. Evaluations of the universal programme (excluding high-risk children) found lower levels of peer-rated aggression and hyperactive-disruptive behaviour and a more positive atmosphere in participating classrooms (39). The broader package of measures delivered to high-risk children resulted in fewer aggressive behaviour problems and improved social and emotional skills among those who received the intervention (40). A follow-up study of the high-risk group, three years later, found enduring effects among both children and parents (41). The broader Fast Track intervention, including PATHS and targeting high-risk children, has also been shown to be cost-effective (42). High-quality programme implementation and strong support from school principals are thought to be critical to its success (43).

Social development programmes promote pro-social behaviour and aim to prevent aggression in children by fostering social skills such as anger management, moral development, empathy, developing and maintaining healthy relationships, problem-solving and conflict resolution. Often delivered in school settings, social development programmes can be universal or target at-risk groups. Classroom lessons are typically combined with broader measures to increase social participation (e.g. involvement in school activities), enhance recognition for positive social behaviour and strengthen

bonds between children and positive role models. Thus social development programmes often seek to change the whole classroom or school environment, making them places of greater opportunity, bonding and reward for children. Social development training can also form an important part of family-focused interventions. The evidence for the effectiveness of social development programmes is solid, with studies showing that well-implemented programmes improve social skills and reduce aggression in young people (25–37). **Box 3** highlights the positive effects on violence prevention of a

social development programme known as Promoting Alternative Thinking Strategies (PATHS).

Other examples of school-based social development programmes include Second Step, which uses a classroom-based curriculum to develop skills including empathy, problem-solving, anger management and impulse control. Universal implementation of Second Step has been evaluated in a number of countries using various evaluation techniques and the programme has been associated with reductions in problem behaviour and improvements in social competence in children, at least in the short term. See for example references to results of a United States randomized controlled trial (44), a Norwegian cohort study (45) and a German randomized controlled trial (46). However, most of the positive effects reported from the programme are of moderate magnitude, and research has yet to provide solid evidence of the effectiveness of these programmes over the long term. Short-term benefits have also been reported from a programme in Lithuania known as Zippy's Friends. The 24-week programme aims to develop coping skills among school children (aged six years, on average). A cohort study found that Zippy's Friends is associated with decreased disruptive and hyperactive behaviour (47).

When combined with teacher training and parental education, social development programmes may also provide longer term benefits. For example, a cohort study found participation during elementary school in the multi-component Seattle Social Development Project was associated with a reduction in student reports of violent delinquency six years after the intervention (48% compared with 60% in the control group) (25). Project participants also reported lower levels of heavy drinking and improved sexual health markers (e.g. multiple sexual partners and teenage pregnancy) at age 18 years. Cost-benefit analyses suggest that the project generated \$3.14 in benefits for every dollar invested (26) and, by the time participants

reached 21 years, the programme was associated with better functioning in school and the workplace and better emotional and mental health. Studies of the Seattle project, however, do not show significant reductions in crime and substance use among participants, compared to the control group (48). Other social development programmes have also shown short-term positive effects on both violence and health-damaging behaviour. For example, a randomized controlled trial of the Life Skills Training programme in New York City, which has previously shown benefits in preventing substance use, found reduced verbal and physical aggression in participants at three-month follow-up (26).

Social development training can form an important part of family-based violence prevention. For example, in the United States the Iowa Strengthening Families Program provides social development training for children (in problem-solving, stress and emotions management and refusal skills) with concurrent sessions for parents to develop skills (in disciplinary practices, effective communication with their children and managing strong emotions). These training programmes are followed by joint child-parent sessions to practice learnt skills, facilitate family-conflict resolution and increase family cohesion. A randomized controlled trial of the programme among students in grade 6 (aged 11–12 years) found lower levels of aggressive and hostile behaviour among the child participants four years after the intervention, as measured by both child self-reports and observer reports of aggression and hostility in child-parent interactions (49). Successful family-focused interventions, such as parenting education, can strengthen the ability of parents and caregivers to develop effective social and emotional skills in their children. (For details about preventing violence through programmes that foster safe, stable and nurturing relationships between children and their parents and caregivers, see the briefing in this series on this topic.)

4. Academic enrichment programmes

Academic enrichment programmes aim to improve children's academic achievement and school involvement by supporting their studies and offering recreational activities outside normal school hours. Low academic achievement and truancy are risk factors for violence; so, programmes that improve children's academic performance and school attendance may have the potential to reduce involvement in violence. Academic enrichment programmes cover a wide range of subjects and skills, including basic numeracy and literacy, curriculum and exam revision, foreign languages, sports, crafts and adventure activities. When targeted at children in socially deprived areas, these programmes have been found to increase numeracy, literacy and school attendance, and improve exam outcomes and attitudes towards school (50).

Academic enrichment programmes are widely used in the United States and some evaluations of them have measured behavioural or criminal justice outcomes. However, findings have been mixed, and often shown no, or even negative, effects. For example, the LA's BEST programme targets at-risk youths living in deprived areas of Los Angeles, offering free after-school enrichment and recreational activities. Evaluation of the programme suggested it had no effects on violent crime or overall crime (51). Across the United States, 21st Century Community Learning Centers (CCLCs) received government grants to provide academic enrichment out of school hours, targeting students from deprived communities in particular. Evaluation of the CCLC programme in five areas found no benefits in academic achievement and some negative impacts on behaviour: for example, intervention participants were more likely to engage in negative behaviour resulting in teacher discipline or suspension from school (52).

More positive findings have been reported for the multi-component CASASTART programme in the United States, which is a community-based, school-centred programme targeting high-risk children, aged 8–13 years. Each programme case manager provides intensive support to up to 15 vulnerable children and their families, in partnership with schools, criminal justice agencies and community-based health and social services. The programme provides after-school and summer recreational activities together with social support, family services, educational services, mentoring, incentives, community policing and criminal/juvenile justice interventions and other support. Evaluation of the programme at five sites reports benefits, including lower engagement in violent crime, lower drug use and less association with delinquent peers (53,54).

Similar multi-component programmes are being run in Australia (55), the United Kingdom (56) and the United States (57), among other countries, in what are known as Extended or Full-Service Schools. These programmes provide a range of services and activities for youths, families and communities at schools, outside normal school hours. Their aim is to promote positive academic and social development among youth. Although evaluations have not examined their effects on violent behaviour, these programmes have reported success in promoting pro-social behaviour, academic achievement and, in the United States, reducing rates of under-age initiation into drinking alcohol (57). In the United Kingdom, Full-Service Extended Schools (FSES) are being introduced nationally, providing services such as study support, community activities, adult learning, health services and child care. Evaluation of the national roll-out of FSES over three years suffered from a lack of baseline data, yet re-

ported positive impacts on educational attainment (particularly for pupils facing learning difficulties). Qualitative data also suggested that school-based support had reduced conduct problems and aggression among individual at-risk pupils. Other estimates, meanwhile, suggest that, while the costs of implementing the programme are high, the savings usually exceed the costs, especially among vulnerable individuals (56).

Further research is needed on the effectiveness of academic enrichment programmes in preventing violence. Findings to date, however, suggest that, while the targeting of schools serving children from deprived areas can help to reach those vulnerable to violence, special effort is needed to recruit those most at risk. Successful programmes tend to have strong leadership and commitment within schools, a broad range of different age-appropriate activities and well-trained staff (56–59). Academic enrichment programmes may also produce their best results when they adopt a strategic approach tailored to the local context. This calls for strong links

to other agencies and organizations in the community addressing similar issues, and solid partnerships between families, schools and communities. While school, family and community partnerships may not directly deliver life skills, they can help create an environment that is conducive to their delivery through other methods. Studies show that such partnerships have been associated with higher achievement in school and reduced behavioural problems in young people (60,61). For example, the Communities that Care (CtC) programme in the United States empowers communities to address youth behavioural problems by identifying and acting upon locally-relevant risk and protective factors. A randomized controlled trial of CtC found lower initiation to violence, theft and vandalism among children from participating communities compared with those in a control group (62). The CtC programme has also been implemented in several other countries, including Australia, the Netherlands and the United Kingdom.

5. Incentives for youths to complete education

Providing young people with incentives to attend and complete school can increase school participation and educational attainment, and thus promote factors that can protect young people from involvement in violence. Incentive programmes are typically used in secondary schools and involve financial support to encourage youths to graduate and pursue higher education. They are usually targeted at youths from low-income families who are at risk of low academic achievement. While such pro-

grammes have shown success in improving educational outcomes and reducing antisocial behaviour, evaluations to date have not measured violence as an outcome. Evaluations of the Quantum Opportunities Program in the United States, however, have looked at impacts on criminal behaviour, though the results are mixed (8,63). The programme combines financial incentives with a range of other activities, including academic enrichment (see [Box 4](#)). In the United Kingdom, an incentive scheme to encourage

BOX 4

Effect of combined incentives and academic enrichment in the United States

The Quantum Opportunities Program (QOP) targeted disadvantaged youths, beginning in 1989 with students in grade 9 (age 14–15 years), offering financial and other support throughout high school. At first, 25 at-risk youths in each of five communities were selected to participate in the scheme, which involved tutoring, training in life skills and community service activities. Participants were also provided with financial incentives for taking part in programme (starting at \$1 per hour, with a \$100 bonus for every 100 hours), and each participant was allocated an adult mentor for the duration of the programme. A randomized controlled trial found that, compared to students in a control group, more QOP students graduated, proceeded to higher education and took part in community projects and fewer dropped out of school. These students were also less likely to become teenage parents (24% QOP students versus 38% in the control group) and less likely to have been in trouble with the police in the last 12 months (6% of QOP students versus 13% in the control group). Cost-benefit analyses suggested the programme would save between US\$ 3 and US\$ 4 for every dollar invested (63).

From 1995 and 2001, a randomized controlled trial of a QOP demonstration project was conducted at seven sites in the United States. Here, little success was seen six years after participants were due to have graduated from high school. Participants were no more likely to have graduated, pursued a post-secondary education or vocational training. Nor were they more likely to have earned higher grades, improved their employment outcomes or exhibited lower levels of risky behaviour. Rather, QOP showed detrimental effects on both committing crime (3% increase) and being arrested or charged (6% increase). Researchers attributed this lack of success to a failure to fully implement all aspects of QOP, low participation rates among students and the scope of QOP, which did not aim to influence wider school operation. Unlike the initial implementation of QOP, which targeted students based on low income, the demonstration targeted those with low academic achievement and thus participants had greater academic needs. The evaluation suggested there was a need to start the intervention at an earlier age and to ensure that services are tailored to the needs of participants (8).

youths to continue on to higher education has been implemented nationally since 2004. The Education Maintenance Allowance scheme provides up to £30 per week to young people from families with incomes below a certain amount (around £30 000, in England) to participate in higher education. Studies indicate that the scheme has boosted participation in higher education and, for males, improved educational attainment. Based on survey findings, the scheme was estimated to have retained 18 500 young people in education in 2004–2005 (64). The scheme has not, however, significantly improved retention in education among members of most minority ethnic groups.

Incentives such as food are also used in developing countries to promote participation in preschool and primary education. Although their impacts on violence have not been measured, programmes offering incentives have been found to increase educational attendance, retention and performance, with benefits particularly among poor children (65). In Kenya, preschool participation was found to be 30% higher among children attending schools providing them with breakfast (66). The feeding programmes were also associated with higher curriculum test scores, although only in schools with more experienced teachers.

6. Vocational training for underprivileged youths

Vocational training aims to provide disadvantaged young people with skills to find jobs, earn more income and avoid involvement in crime. Programmes typically include one or more of the following elements: classroom-based learning, paid work experience and on-the-job training (67). Developed and developing countries alike have implemented vocational training programmes and studies have shown that they can have positive effects on participants' employment prospects, particularly in developing countries. A global meta-analysis found that such training in low- and middle-income countries was 50% more likely to result in youths finding employment than vocational training in developed countries (68). The impact of vocational training on violence, however, has not been widely studied and, while a number of studies in the United States have measured its effects on criminal behaviour, the findings have been mixed.

In the United States, a review of nine studies of

vocational training programmes specifically aimed at preventing youth crime and delinquency found that just two showed short-term positive impacts. Six had no effects and one led to increased criminal behaviour (69,70). This large-scale study measured the impacts of programmes funded through the United States Job Training Partnership Act (JTPA), which involved a range of vocational training programmes targeting out-of-school 16–21-year-olds. A randomized controlled trial following participants three years after enrolment in JTPA programmes found that males who had not been arrested prior to programme participation were significantly more likely to have been arrested after enrolment than were male members of the control group (26% compared with 19%) (69–71). **Box 5** outlines the findings of evaluations of the JOBSTART project in the United States, which has also measured impacts on criminal behaviour.

BOX 5

JOBSTART in the United States

The JOBSTART demonstration project targeted economically disadvantaged school dropouts, aged 17–21 years, between 1985 and 1988, with the aim of improving their employment and earning prospects. Participants were provided with vocational and educational training, job placement assistance and support services, such as child care and counselling. The demonstration involved 13 sites across the United States, with participants and controls recruited and followed for four years. Violent behaviour was not measured, yet initial follow-up after one year found small reductions in criminal behaviour (arrests). These effects were not sustained after four years, however, when 29% of both JOBSTART participants and members of the control group reported having been arrested during their lifetime. Nevertheless, the study did show reductions in drug use over the four years, particularly for males who had been arrested prior to enrolment in the programme. Here, 3.7% reported use of drugs other than marijuana at some time during their lives, compared with 10.5% of the controls. Participants also had higher earnings, though no improvement in academic achievement (72).

7. Summary

Interventions that support children in the development of life skills can have positive impacts on young people's opportunities through improving pro-social abilities, educational attainment and employment prospects and can help prevent violence. Of the five types of interventions discussed, the evidence is strongest for those that target children early, through preschool enrichment and social development training – both in terms of reported outcomes and, critically, of the number and quality of studies measuring impacts on violence. Cost-effectiveness studies also indicate that the rate of return on investment in such interventions aimed at disadvantaged children is higher the earlier in life that the intervention occurs (73). Thus there is a well-developed evidence base for the effectiveness of preschool enrichment programmes and social development programmes in preventing aggression and improving social skills, particularly in deprived children. Furthermore, high-quality programmes have shown that these effects can be sustained well into adulthood. Such programmes can also show positive impacts on a range of other health-risk behaviour, such as substance use and unsafe sexual behaviour.

Our understanding of the impacts of academic enrichment, incentives to complete schooling and vocational training programmes on violence prevention is less developed and there is a need for rigorous evaluations in this area. Studies that have found positive effects on behavioural outcomes often suggest these are short-lived, while some programmes for adolescents have even shown detrimental effects. While the mechanisms behind such negative effects are unclear, bringing at-risk youths together may have a normalizing effect on

their deviant behaviour (74). However, skills taught to adolescents through academic enrichment, incentive and vocational training programmes are often significantly different from those taught in interventions offered to young children. While preschool enrichment and school-based social development programmes typically seek to promote social and emotional skills, programmes targeting adolescents largely focus on academic and vocational skills development. This, combined with differences in the mode of evaluation (e.g. methodologies, quantity and quality of studies conducted and outcomes measured), complicates the comparison of different types of interventions.

Most studies on the impact of life skills programmes – of all types – on violence prevention have been conducted in developed countries, particularly in the United States. Improving knowledge of how well life skills programmes proven to be effective in high-income settings translate to low- and middle-income settings must be a key research priority. Given their proven benefits and cost-effectiveness in high-income countries, there is, however, every reason to believe that these programmes can be effective in low- and middle-income countries. Although the evidence-base for the violence prevention effects of other types of programmes is limited, vocational training programmes have been shown to improve employment prospects most significantly in low- and middle-income countries. Together, the evidence reviewed in this briefing underlines the importance of targeting violence prevention efforts as early in life as possible to achieve maximum benefits and protect children from risk factors that increase their propensity for violence.

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