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Sincerely,
EJES, Team

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Teenage Pregnancy and Adolescent Sexual and Reproductive Health Behavior in Suhum, Ghana[1]

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Abstract
        This study sought to investigate the key factors that influence teenage reproductive and sexual behaviours and how these behaviours are likely to be influenced by parenting styles of primary caregivers of adolescents in Suhum, in Eastern Ghana. The study aimed to identify risky sexual and reproductive behaviours and their underlying factors among in-school and out-of-school adolescents and how parenting styles might play a role.
While the data from the study provided a useful snapshot and a clear picture of sexual and reproductive behaviours of the teenagers surveyed, it did not point to any strong association between parental styles and teens' sexual reproductive behaviours.

Introduction
        This research sought to present a more comprehensive look at teenage reproductive and sexual behaviours and how these behaviours are likely to be influenced by parenting styles of primary caregivers of adolescents in Suhum, in Eastern Ghana. The study aimed to identify risky sexual and reproductive behaviours and their underlying factors among in-school and out-of-school adolescents and how parenting styles might play a role. It was hypothesized that a balance of parenting styles is more likely to

produce positive sexual reproductive behaviours in young people. The research was conducted between 2009 and 2011[2].

Objectives
Specific objectives of the study included:
1) To investigate the variety of parenting styles and how that impact on adolescents sexual and reproductive behavior
2) To determine teenagers' perceptions of their parents' style of parenting.
3) To investigate the level of sexual activity, contraceptive use, and pregnancy among teenagers.
4) To determine the relationships between these factors.

Context
      The vulnerability of adolescents in sub-Saharan Africa to HIV is alarming as they account for almost two-thirds of those living with the disease. Their susceptibility has been attributed to a myriad of factors, in particular, risky sexual behavior. Not surprisingly, the last decade has witnessed an upsurge of research findings indicating that adolescents in many countries do not engage in safe sex practices. (Abdulraheem and Fawole, 2009; Kabiru and Orpinas, 2009; Buga, 1996; Sia, *et al*., 2016).Among the most salient determinants of risky behavior is family structure. Indeed, several studies in the US have emphasized the relevance of familial structure on adolescent health and reproductive outcomes. (Day, 1992; Flewelling & Bauman, 1990; Lauritsen, 1994; Upchurch, Levy-Storms, Sucoff, & Aneshensel, 1998; Whitbeck et al., 1992; Wu & Martinson, 1993; Young et al., 1991)

      However, the bulk of this scholarship has focused on the US and other Western countries and although some progress has been made toward understanding family structures in various cultures, the scholarship has been dominated by information of Western societies. Young adults also account for a disproportionate share of new HIV infections in sub-Saharan Africa. (UNAIDS, 2008) An estimated 4.3% of young women and 1.5% of young men aged 15-24 years in Sub-Saharan Africa were living with HIV at the end of 2005. According to UNAIDS, 2014:1) "adolescent girls and young women account for one in four HIV." .

      While UNAIDS' GAP report notes HIV deaths are declining globally, it paints a somber picture of the pandemic in Africa:
      "There are an estimated 24.7 million [23.5–26.1 million] people living with HIV in sub-Saharan Africa, nearly 71% of the global

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2 Publication of this report was delayed due to unforeseen circumstances.

total. Ten countries—Ethiopia, Kenya, Malawi, Mozambique, Nigeria, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe—account for 81% of all people living with HIV in the region and half of those are in only two countries— Nigeria and South Africa. There are also more women living with HIV in sub-Saharan Africa than HIV-positive men: women account for 58% of the total number of people living with HIV. There are 2.9 million [2.6 million–3.2 million] children (aged 0–14), 2.9 million [2.6 million–3.4 million] young people (aged 15–24) and more than 2.5 million [2.4 million–2.7 million] people aged 50 years and older living with HIV in sub-Saharan-Africa." (p.28)

In the era of the AIDS pandemic, accurate monitoring of trends in risky behavior has become increasingly important as intervention programs seek to discourage premarital sexual activity ((Zaba, Whitworth , Marston, Nakiyingi, Ruberantwari, Urassa, Issingo, Mwaluko, Floyd, Nyondo and Crampin, 2005).

Adolescent premarital sexual activity is fairly common in Ghana. 54 percent of never-married male students, and 32 per cents of never-married female students (GSS, NMIMR; ORC Macro. 2004; GSS, 2003) In 1998, the Ghana Demographic Health Survey (GDHS) reported that teenage pregnancy was on the rise and that early pregnancy loss (miscarriages) among girls age 15 to 19, especially those residing in urban areas was approximately twice as high as among other women.

(GSS, MI and GDHS, 1998). At the same time, the Ghanaian premier newspaper, *The Daily Graphic* reported that Suhum—a town of about 50,000 residents—led the nation in the number of teenage pregnancies. (The Daily Graphic, 1998)) Four years later in 2002, the same newspaper carried a report which indicated that Suhum-Kraboa-Coaltar District3, of which Suhum is the capital, was leading the Eastern Region in teen pregnancy rates. (The Daily Graphic, 2002) The Ghana News Agency reported that in 2014 the Eastern Region recorded more 13,520 students between the ages of 12 and 15 got pregnant students (Daily Graphic Online, 2014)). The figures were obtained from the Ghana Education Service (GES). The corresponding figures for the Suhum Municipal Area is 517 pregnancies out of 5,157, the second highest in the region. The Nsawam Adoagyiri District recorded the highest of 935 pregnant girls, representing 19 per cent out of the total girls' enrolment of 4,771, in the district. (Ibid.)

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3 Since this research was conducted, the Suhum-Kraboa-Coaltar District has been re-named the Suhum Municipal Area.

Research Questions:

The study sought to answer the following five questions:

a) What roles do parenting style and family structure in fostering adolescent sexual discipline and sexual health?

b) What are the socio-cultural factors behind declining adolescent sexual discipline and sexual health?

c) What role do gender power relations and gender asymmetry play in parenting styles and how does this affect adolescents' sexual and reproductive behavior?

d) To what extent do traditional and modern methods of sex education and socialization affect adolescent sexual and reproductive behaviors?

e) How do adolescents' personal beliefs and convictions affect the impact of sex education methods?

The study proceeded from two conceptual frameworks: a) that the concepts of parenting and adolescence sexual and reproductive behavior are social and cultural constructs, reflecting both gender and power relations and b) that gender and power relations between the genders within the family and the larger society play a significant, if not the most significant, role in determining the efficacy of which type of parenting style in the upbringing of young people. It is the view of this researcher that both parenting styles and gender relations play a crucial role in adolescent sexuality and its differential consequences for adolescent girls and boys. Hence this study devoted a considerable attention to both frameworks. The study also sought to identify socio-cultural and environmental/structural factors influencing teenage pregnancy and other sexual and reproductive activities. Thus, such factors as socialization (the internalization of cultural beliefs and practices), poverty, gender inequality, parental and peer influence, opportunities for education and employment were studied. In addition, internal factors, such adolescents' personal beliefs and convictions or agency were examined.

This study hypothesized that parental style provides a useful explanatory framework for understanding how parents prefer to as well as actually interact with their children. At the same time, these preferences may lead to differences in attitudes and perceptions of parental roles as these parents develop parenting strategies with regard to specific threats to their children.

Four hypotheses regarding sexual and reproductive behavior and parenting styles were examined.

a) Adolescents whose parents are authoritarian will report higher levels of sexual discipline and sexual health.

b) Adolescents whose parents are permissive will report lower levels of sexual discipline and sexual health.

c) Authoritarian parents will report higher levels of involvement in their children's sex education.
d) Permissive parents will report lower levels of involvement in their children's sex education.

In addition, the researcher sought to determine if adolescents' agency or free will, peer pressure, teachers' influence and exposure to the mass media play any roles in reinforcing or cancelling parenting styles.

Literature Review

In Ghana, empirical studies on adolescent and reproductive health are a fairly recent phenomenon. This may be due to the fact that first, until 1969 when Ghana adopted a national population policy, population issues were not favourite topics for social scientists. A second plausible explanation may be that as a typically traditional society, issues relating to sex and sexuality are not for public discourse. Possibly, therefore, many local social scientists have shied away from studying reproductive health, especially of the youth. As would be expected, much of the available material on this topic dates from the 1970s. Even though the legal age at first marriage is low (18 years) the youth engage in premarital sex for various reasons. Poverty and lack of attention from caregivers are significant contributors to early sexual relationships (Afenyadu and Goparaju, 2003).Monies that the youth receive are used to provide basic needs such as school fees, food and to pay medical bills. Another study revealed that, one-third (33%) of the sexually-active female adolescents and 13 percent of the sexually-active males reported that they had had sex for a financial reward.

Early sexual relationships also result from peer pressures, the need for pleasure and financial difficulties.(Population Impact Project, 1995) The GDHS records that 62% of males and 38% of females engaged in sexual relationships because they just wanted to do so. In addition, a significant number of females get involved in sexual activities due to coercion or force; 2% of males and 12% of females claimed they were coerced to have sex while 0.5% of males and 0.6% of females were forced by a family member.

In Ghana only 16% of teenage girls can correctly indicate when a woman is most fertile and likely to become pregnant. However, some reported having used periodic abstinence which is the most preferred contraceptive method among the youth (Gyekye, 1996; Tweedie & Witte, 2000; Agyei et al., 2000; Glover et al, 2003). The contraceptive prevalence rate among young women between the ages of 15-19 was 19%; 13; % of them used modern methods while 12% used traditional methods. This may also be due to the lack of information and youth-friendly services.

One study about Southern Ghana reported that young girls used harmful but cheaper methods to terminate pregnancies. (Saller, 2001)

Writing on abortions in a Kwahu town in the Eastern Region of Ghana, Bleek and Asante-Darko revealed the modes and methods –both allopathic and indigenous- employed in the exercise.(Bleek and Asante-Darko, 1996) The allopathic methods included a wide range of tablets and other medicines while the indigenous methods included a number of herbal preparations. Reasons for inducing abortion range from socio-cultural to psychological. (Senah, 2003). (Also see Awusabo-asare and Biddlecom 2006; Awusabo-asare, , Bankole, and Kumi-kyereme,, 2008)

Traditionally, sexuality was not a topic for children or for public discussion, and was not a topic discussed between parents and their siblings. Indeed, as some studies have shown, girls were 'educated' on their reproductive behaviour only on the attainment of menarche or in initiation rites into womanhood. (Sarpong, 1974; Huber, 1993; Steegstra, 2004) Thus, communication between parents and their children, especially on family life education, is very poor.

Today, although many parents, especially the elite, believe that family life education must be given to their wards, there is no agreement as to when this must begin and the content of such education. Thus, for the youth, the main source of information on reproduction is the Mass media.(Masoloko T, et a, 2003) In conclusion, the little work done on adolescent sexuality has shown that the youth are actively engaged in sexual activities while because of tradition, their educational needs on reproductive health are largely unmet by the society. Consequently, in the absence of any adequately planned direction, the youth depend on their peers and the mass media for guidance.

Parenting Styles and Sexual and Reproductive Behaviour

Family environment counts as one of the most factors impinging on youth sexual behavior, yet remains poorly researched in sub-Saharan Africa, adding that a proper understanding of family influences could improve the efficiency of reproductive health (RH) interventions ((Dimbuene & Defo, 2011, p. 1) The study "Family Environment and Premarital Intercourse in Bandjoun (West Cameroon)" revealed a "stronger parent–child relationships and higher levels of parental control decreased the risk of premarital intercourse." (Harrison, Cleland, Gouws, & Frohlich, 2005, as citied in Dimbuene and Defo).

Lax or lack of proper parental or guardian care and premarital sexual activity during adolescence are strongly correlated. Premarital sexual activity and nascent adulthood triggers a plethora of deleterious outcomes in many African societies, including unintended pregnancies, illegal abortions, sexually transmitted infections (STIs), and HIV/AIDS Dimbuene and defo (2011, p.2). Compounding the problem is the fact that "first sex among

adolescents and young adults in SSA is often unprotected."(Ibid.) rapid urbanization, western cultural influences, poverty, and eroding traditional ethos and cultural practices have all "conspired" to reduce effective parental supervision and control of their adolescent children. For this reason, some research has noted that first sexual experience among teens and youth adults constitutes a huge social problem and a serious public health issue. (Ibid.)

A balance of positive and flexible parenting methods is crucial to a child's overall emotional, cognitive and mental development. Good parenting forms the bedrock for adolescents and young adults acquiring good moral and ethical behavioral traits. (Darling and Steinberg, 2012; Grusec, 2006; Maccoby and Martin, 1983; Bornstein and Bornstein, 2014).

Recent Research Results
Multiple lines of research have established a link between authoritative parenting— a parenting style by which parents balance demandingness and responsiveness--with higher social competencies in children. According to recent research findings, "children of authoritative parents possess greater competence in early peer relationships, engage in low levels of drug use as adolescents, and have more emotional well-being as young adults." (Bornstein and Bornstein, 2014:1).

Commenting on authoritarian and permissive styles of parenting, Bornstein and Bornstein (2014) have observed that the two are believed to be diametrically opposed, "neither style has been linked to positive outcomes, presumably because both minimize opportunities for children to learn to cope with stress." The researchers contend that "too much control and demandingness" tend to limit children's opportunities to make decisions for themselves or to make their needs known to their parents, while children in permissive/indulgent households may lack the direction and guidance necessary to develop appropriate morals and goals."

Bornstein and Bornstein (2014) maintain that while recent research appear to be robust, their applicability across cultures and environments is questionable. This is because many of the studies focus on white, middle-class children and families, but children with different ethnic/racial/cultural or socioeconomic backgrounds may fare better under different types of guidance.

"Ethnic and cultural differences must also be taken into account in studying the effects of parenting styles on child social development. It is difficulty to escape social pressures that judge some parenting styles to be better, usually those that reflect the dominant culture. Authoritarian parenting, which is generally linked to less positive child social outcomes, tends to be more prevalent among ethnic minorities. In Asian ethnic families, authoritarian parenting is linked to positive social outcomes and academic

success, due in part to parenting goals and training specific to Asian-origin families." Bornstein and Bornstein, 2014: 2)

What remains to be established is the link between parenting styles and reproductive behaviour, particularly in adolescent females and males. This research sought to do just that.

METHODOLOGY

The research design used both quantitative and qualitative methods, including focus group discussions, out-of-school adolescents, teachers, parents, and community opinion leaders.

The Qualitative

Quantitative and qualitative research methods were used to collect data. The quantitative and qualitative research instruments were designed in such a way that they complemented each other. The key qualitative research method used focus group discussions with community opinion leaders, teachers, as well as in-and out-of-school adolescents. Individual sex histories were taken from a cross-section of adolescents, primary caregivers and community opinion leaders.

Separate focus group discussion guides were prepared to guide the discussions with in-school adolescents, including Senior Secondary School (SSS) and Junior Secondary School (JSS) students, out-of-school adolescents, teachers, and community opinion leaders. Information was also gathered from secondary sources, including head teachers/masters, the Suhum Government Hospital, and the District Assembly.

The Quantitative

For the quantitative research, three questionnaires were designed and applied as instruments for data collection. One questionnaire was directed to adolescents (both in-school and out-of-school), and to community opinion leaders. For the in-school adolescents, the questionnaire was administered at both the SSS and JSS levels. The adolescent questionnaire was administered to representative samples of adolescents and community opinion leaders (members of the local assembly). The research employed a combination of snowball sampling and random sampling techniques. Snowball sampling method was used in recruiting out-of-school teenagers. This was done with the assistance of mostly teachers and the research assistants, but some community leaders (local assembly members) also helped. . Random sampling techniques were used in recruiting in-school teenagers. With the assistance of teachers and two Ghanaian research assistants (themselves teachers), every third student in a row of 12 students were called and sent to a computer lab in the case of Suhum Senior Secondary School and a vacant

classroom at Suhum Junior Secondary School. In all, 250 adolescents were selected. Out of this number, 217 actually participated in and returned their questionnaires. Most of the unreturned questionnaires were from the out-of-school participants. Twelve of the questionnaires from Suhum Junior Secondary Schools and five from Suhum Presbyterian Senior Secondary School were returned blank or partially completed.

RESULTS
Demographics

This study involved three participant groups: Newtown Junior Secondary School (NJSS), Suhum Presbyterian Senior Secondary School (SPSSS), and Out-of-School Teenagers (OOS). Detailed demographic questions were asked in the survey pertaining to their age, sex, personal history, family background and so forth. It is imperative that such questions were asked because it will provide a better picture of the population that is being surveyed.

Participants
Group 1: Newtown Junior Secondary School (NJSS)

	Males	Females	Overall
Number of Participants	22	15	37
Age Range:	10-18	10-18	10-18
Mean Age:	14.95	14.80	14.89

Group 2: Suhum Presbyterian Senior Secondary School (SPSSS)

	Males	Females	Overall
Number of Participants	79	62	141
Age Range:	9-25	14-20	9-25
Mean Age:	17.87*	17**	17.49***

*For 78 participants, one did not state their age
**For 61 participants, one did not state their age
*** For 139 participants, two did not state their age

Group 3: Out of School   (OOS)

	Males	Females	Overall
Number of Participants	19	20	39
Age Range:	14-19	14-19	14-19
Mean Age:	17.26	17.1	17.18

Across all three groups, Christianity was the dominant religion: NJSS 97.3%, SPSSS 95.7%, and OOS 84.6%.

Parents and Guardians

Parents and guardians serve an important role in the lives of the teenagers. They are both their caregivers and role models. Parental background questions were included in the survey. These question included age, marital status, level of education, and religion.

Parents of Newton Junior Secondary School Students

	Father	Mother
Number of Responses	23	23
Age Range:	30-70	25-60
Mean Age:	46.04	41.39
Education:		
Elementary	32.4%	32.4%
Secondary	43.2%	21.6%
Post-Secondary	5.4%	2.7%
No formal Education	10.8%	29.7%
No Answer	8.1%	13.5%

Parents of Suhum Presbyterian Senior Secondary School Students

	Father	Mother
Number of Responses	95	112
Age Range:	34-78	25-67
Mean Age:	50.28	44.06
Education:		
Elementary	29.8%	38.3%
Secondary	36.2%	25.5%
Post-Secondary	22.0%	9.9%
No formal Education	9.9%	22.7%
No Answer	2.1%	3.5%

Parents of Out of School Teenagers

	Father	Mother
Number of Participants	30	30
Age Range:	39-71	34-53
Mean Age:	50.83	42.87
Education:		
Elementary	59.0%	71.8%
Secondary	30.8%	15.4%
Post-Secondary	7.7%	2.6%
No formal Education	2.6%	10.3%
No Answer	0.0%	0.0%

With similar results compared to their children, across all three groups, parents' religion was predominantly Christianity: NJSS parents 92.6%, SPSSS parents 92.9%, and OOS parents 85.9%. The above data also showed that a very small percentage of parents achieved an education level higher than secondary school. This is especially true for the mothers in all three groups. We may infer that the gender inequality in the education level of parents was due in part to the fact that mothers were more likely to have had to put an end to their academic career in order to care for their children. A further analysis of the data shows that the percentage of mothers who have no formal education is more than double that of their male counterpart in all three groups. This further supports the inequality of education between genders and can be seen mirrored in the greater number of males who are in school in this study compared to the females who are in school.

Sexually Active?

Since this study was centered on finding more about sexual and reproductive health of teenagers in Suhum, it was obvious that one of the questions pertain to sexual activity. This pivotal question served as the gateway leading to other questions relating to their sexual practices and beliefs. Participants were therefore questioned if they were sexually active.

It was found that between males and females across all three groups, the highest percentage of sexually active individuals were from the Out of School (OOS) group. From the OOS group, 78.9% males and 95% females answered yes to being sexually active compared to less than 50% from the rest of the groups with the lowest being the NJSS females at only 20%.

Safe Sex Practices

Of great concern, aside from the number of teenagers who are sexually active, is the topic of safe sex practices. There is currently no cure for AIDS and the only method of combating this disease is through prevention. In addition to preventing STDs, safe sex also means preventing unwanted pregnancy.

The data showed that the greatest number of males reporting that they practice safe sex were from the OOS group. While amongst females, there were no significant differences between the percentage of individuals who reported practicing safe sex. It was also found that across all groups, condoms was the dominating contraceptive of choice, although other forms were also practiced such as foam (3.8% SPSSS males), the pill (27.3% SPSSS females), and withdrawal (50% NJSS males). It should be noted that withdrawal, although considered as a form "safe sex" practice, is the least effective. This is hugely due in part to the fact that before a male can feel himself needing to ejaculate, he may already have discharged a substance

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called pre-ejaculate or more commonly known as pre-cum. This substance is capable of impregnating a female and, because it is a form of body fluid, is also capable of transmitting STDs.

Overall, the majority of the participants indicated that they do practice safe sex. This is contradictory to the widely received global message that AIDS/HIV is an epidemic in Africa. Looking at other components of the data, we see that condoms rank first as the indicated contraceptive being used, but most of the respondents indicated that they only use them sometimes. Adding this extra bit of information is significant in that the "sometimes" that condoms aren't being used, gives the disease a window of opportunity to being passed on to the second person. Also, the effectiveness of condoms lies not only in its frequency of usage but also in its method of usage. According to the Centers for Disease Control and Prevention (2003), the correct usage of condoms is vital, and incorrectly using condoms can lead to the transmission of STDs. (Centers for Disease Control and Prevention (2003)

The data comparing the occurrence of STIs amongst the participants revealed that the groups that the JSS Males (57.1%) and OOS Females (21.1%) yielded the most STDs. JSS Females, however, had no occurrence of STDs. This is intriguing, in that JSS Males are infected, yet females are not. But when the participants answered questions regarding same sex activity, we see that 13.6% of JSS males answered yes to having engaged in same sex activity while amongst JSS Females, there is none. So is it safe to conclude that STDs are only passed between males in the JSS group?

Age of First Intercourse

The age of an individual's first sexual intercourse is relevant, in that the younger individuals are often unaware of the risks associated with unprotected sex. In finding out when individuals are first engaging in sexual intercourse, educational programs can therefore be tailored and aimed at these groups. Current sexual health programs may be less effective if they were delivered to those who have already been engaging in sexual activities since an earlier age and/or have been already exposed to STDs. Among the male participants, all of those who were sexually active in the NJSS group report that they engaged in sexual intercourse before the age of 13 (100%). This was also predominantly true for those in the OOS group (53.3%). While in the SPSSS group, 51.4% report to having their first sexual intercourse before the age of 16.

Amongst the female participants, across all three groups, NJSS, SPSSS, and OOS, the majority of individuals (66.7%, 61.1%, and 68.4% respectively) reported to having had their first sexual intercourse before the age of 16.

Factors Influencing Sex

Knowing the percentage of teenagers who are sexually active and at what age they were when they had their first sexual intercourse, is relevant in finding out what the reasons are for them engaging in sexual activities. In summarizing the responses from the participants, it was more fitting to combine all the responses across the groups into one illustrative chart.

Peer Pressure and Peer Pressure from friends, classmates, etc. accounts for the majority of responses (41.1%) from the participants. Indeed, it can be predicted that this would be the outcome since peer pressure, in itself, has lent itself to manifest other destructive behaviors amongst teenagers such as smoking, drug use, and truancy. Money and financial reward make up another bulk (20.2%) of the responses. Devising a strategy to combat these factors would require both teenager and peer education, in addition to addressing the economic disparity that plague Africa.

Pregnancy and Abortion

In addition to the concern of STDs amongst African teenagers, teenage pregnancy is also a problem. Teenage females who are pregnant may face dropping out of school to care for their baby and lack of education which, leads to underpaid labour. Males, who if so choose to provide for their family, may also face the reality of dropping out of school in order to support their new family. But when looking at the responses, we can see that the ratio of males whose wife/girlfriend is currently pregnant is relatively low. The highest lies in the out of school group at 20.0%.

Next, amongst the females, we see a very similar trend in comparison to the male respondents. The majority of females are not pregnant and again, the highest is in the out of school group at 15.8%. More alarmingly, 57.9% of the OOS females have been pregnant before and 40% of the OOS males have impregnated someone before.

Sex Education

The source of teenage sex education is an integral component in understanding the trends found in the data. Advertisements from the mass media—TV, radio, and magazines—are often viewed as providing an over promiscuous view on sexuality. Sex sells. Therefore, it is also important to know where teenagers are getting their information and thus, by augmenting that source to provide more relevant information and a more realistic view to these teenagers. With a reliable educational source, they can better use the available information to their advantage. Amongst all respondents, the top four sources of safe sex education are television (14%), radio (13%), mothers (13%), and teachers (13%).

Parenting Style

Parenting style is an obvious question when trying to relate to teenage behavior. Parents who "slack off" in their parental approach are perceived as being not caring or giving their children too much freedom. If we follow this belief, we should see some correlation between parenting style and deviant behavior—in this case, destructive sexual behavior.

The data showed that most parents fall in the "very strict" parental style category. The lowest percentage between the three groups of very strict parents belongs to the OOS group. The OOS group also has a more evenly distributed parental style of both fathers and mothers, whereas in the SPSSS group, we see a very low percentage of parents falling in the "not strict at all" category.

Summary and Conclusion

Analysis of the data obtained from the questionnaires, provides a clear picture of sexual and reproductive behaviours of the teenagers surveyed. However, the relationship between parental styles and teens' sexual reproductive behaviours is much less clear. First of all, most of the teenagers in this study first engaged in sexual activity at a very young age. This is very important in designing educational programmes and in deciding who the targeted audiences are. Having established that the teenagers in question engage in sexual activity very early, the question then arise as to why? It is evident from the study that the problems mainly reside in the issue of poverty and lack of education. The majority of the teenagers surveyed engaged in sexual activity due to money and financial reward. Sexual activities which stem from fulfilling monetary needs translate into high risk behavior because it means having sex with numerous partners. One only needs to find those who are willing to pay for the "service," as it were. Increased number of partners greatly increases the chance of contracting sexually transmitted diseases. There is also the issue of compliance. The "service provider" who is in desperate need of money is in no position to negotiate the issue of contraceptive use. They are most often at the mercy of their buyer.

The overall trend appears to be that the "sexual deviants" are from the out-of-school group. This is further supported by the data collected from the adults. Therefore, we may further this study by finding out why these teenagers have dropped out of school. Is there a correlation between community support, a healthy parental relationship, and sexual health?
While the link between parental styles and teens' reproductive and sexual behaviours is a bit muddled in this study, it is clear that the socio-economic status and the pervasive poverty among parents prevented most parents to provide the needed sex education for their children. As most of the

participants in the focus group discussions averred, their parents spend less time with them at home, as they work from "dusk to dawn" providing for the family. It can be surmised therefore that while parents are mostly strict disciplinarians, the lack of time prevents them from effective control and supervision of their teenage children. In other words, parents can be strict disciplinarians and still lose control of their children's sexual and reproductive behaviours.

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Teacher Management: Emerging Issues in Kenya

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Abstract
        This is a conceptual paper which reviewed teacher management in Kenya with a particular focus on the emerging issues. Organizations in all sectors are striving to succeed despite the many challenges they face including issues of globalization, rapid changes, especially changes in technology, leadership dynamics and increased competition among others. Organizations' perspective today in the third world are striving to maximize on their major resources to develop and grow their entities by use of teachers acting as their strategic managers in provision of quality of education and teacher management. It reviewed what TSC Act as enacted under the 2010 Kenyan Constitution and its subsequent transformation to an independent commission with an enhanced mandate stipulates. It has delved in the synopsis of emerging issues such as teacher shortage, provision of quality education, professionalizing the teaching service, promotion of teachers, teachers conduct and performance, litigation, information, communication and technology integration, management of HIV and AIDS, industrial unrest, and deployment of effective teachers leadership positions. In summary more budgetary allocation is required to address teacher deficits, employ more counsellors, enforce TSC Act provision and involve all the stakeholders to make the profession more attractive and enhance retention of well trained, qualified and experienced teachers. Transformational leadership model is a key component in managing teachers' affairs.

Keywords: Deployment, litigation, discipline, morale.

Introduction
        Teacher management in Kenya is a mandate executed by the Teachers Service Commission Kenya (TSC). The most important way to succeed is to use various determinants which may favour implementation of

teacher management strategies that are critical for yielding desired results. Organizational determinants are so important and can lead to success or failure of any organization. On the other hand, teacher management strategy is an important component both at national and regional levels to implement. Teacher management strategy implementation is the last phase and particularly determines what an organization will be in future (Pearce and Robinson, 2013). The Teachers Service Commission is established under the constitution to perform all teacher management functions following the enactment of Kenya Constitution 2010 under Article 237 and the enactment of TSC Act no 20 of 2012 (TSC Annual Report, 2012-2013). Under the new constitution 2010, TSC was transformed to a constitutional Commission with expanded mandate. The Directorate of Teacher Management is the professional arm of the Commission and is mandated to carry out the following core functions:

- *To register trained teachers.*
- *To recruit and employ registered teachers.*
- *To assign teachers employed by the commission for service in any public school or institution.*
- *To promote and transfer teachers.*
- *To review the standard of education and training of persons entering the teaching service.*
- *To review the demand for and supply of teachers.*
- *To advise the national government on matters relating to the teaching profession.*
- *To establish and maintain a Teachers Service adequate to the needs of public schools and tertiary institutions in Kenya.*
- *To publish and compile a code of Regulations which shall apply to all registered teachers and may time to time modify or amend it in such manner as it deems fit. (TSC Act, 2012).*

Organizational leadership is the process and practice by key executives of guiding and steering people in an organization towards a vision over time and developing that organization's future leadership. Due to intense competition, volatile and changing management environment coupled with need for effectiveness and survival, good leadership is necessary aimed at improving the standards (Kotter, 1990). Good leadership ensures the ability to anticipate, envision and maintains flexibility to empower others to create strategic change (Hanson, Hitt, Ireland, & Hoskisson, 2013). Leadership which transforms a vision into reality and motivates people to transcend their personal interest for the good of the group or the organization.

This review is informed by transformational leadership theory (Kotter, 1990) where leaders use charisma and related qualities to inspire extraordinary efforts. Transformational leadership is change and performance oriented leadership. Effective transformational leadership results in performances that exceed organizational expectations (performance beyond expectation). TSC should use the tenets of transformational leadership in their management of the teachers. This will occur when the leaders: When leaders make followers aware of the importance of their jobs to the organization and how necessary it is for them to perform those jobs well, possess exceptional cognitive skills, believe in people and show sensitivity to their needs, are flexible and open to learning from experience, empowers followers to do what is best for the organization and a strong role model with high values. Tichy & Ulrich, (1984), on the other hand categorizes major roles of transformational leadership to include: Creation of a vision, mobilization of commitment to the vision and institutionalization of the change throughout the organization.

2.0 LITERATURE REVIEW EMERGING ISSUES
TEACHER SHORTAGE

Teachers constitute the core of the education system and their importance in students/pupils performance has been widely confirmed by many studies (Rivkin, Stephen, Ertik & John, 2000). In recent years, an increasing number of studies have expressed concern about current and prospective teacher shortages in many countries. According to Santiago (2002), severe shortages currently exist, and there is a gap between demand and supply of teachers needed to ensure effective teaching in many countries.

Teacher deficit is therefore a major concern to educational authorities taking cognizance of the teacher pupil/student ratio and should be addressed continuously by policy makers. Qualified teachers in both the developed and developing world are becoming the hardest segment of the teaching profession to attract and retain and are the most expensive to educate (World Bank, 2006). In Kenya, weaknesses in human resource planning has affected training and deployment of teachers and thus distorted their distribution and utilization. Consequently, there exists an unbalanced distribution of teachers, teacher shortages, teacher surplus and utilization of teachers (MoEST,2005b)` There is acute shortage of teachers as students increased due to Free Primary/Free Secondary Education and opening of new schools which the commission had not anticipated. Although the commission has over the years tried to bridge the gaps in teacher establishment across the country, there is still a shortage of over 85,000 teachers (TSC Annual Report, 2014-2015). The determination of staffing requirements is effected in many ways. Some of these norms include curriculum based establishment

(CBE) used in Post-primary institutions, Pupil: Teacher ratio (PTR) used in primary schools, subject cluster, number of teachers per class and class and class sizes (Akala & Maithya, 2014).

Globally, the recruitment and retention of highly qualified teachers remains challenging with particularly reference to Sub Saharan Africa, Asia and Latin America. It was estimated that between 2010 and 2015, 6-8 million teachers need to be recruited to ensure quality primary education for all children globally (UNESCO, 2012). In addition, research has shown that academically talented college students are less likely to become teachers and effective teachers in subject areas of shortage are more likely to leave the profession (Hoxby & Leigh, 2004).

In Kenya, teachers' recruitment was done through supply driven process. It was until 1998 when the government of Kenya froze teacher recruitment as a cost cutting measure as a response to structural adjustment programmes by the International Monetary Fund particularly to developing countries. This led to the adoption of demand driven policy on teacher recruitment in 2001 (TSC, 2002). Under demand driven recruitment policy, the government has been employing limited number of teachers both at primary and post primary institutions annually. However, this does not cater for the actual shortfall. The TSC Annual report 2014-2015 puts the total figure of teacher shortage at 85,000 nationally. Teachers play a significant role in ensuring quality instruction and education in schools. They manage and provide leadership to schools, develop and implement curricula. For these services to be effectively accomplished, teachers must be adequately recruited and deployed to schools. Sessional paper No 1 of 2005 a policy framework for Education, Training and Research in the 21st Century and the Kenya Education Sector Support Programme (KESSP) (Republic of Kenya, 2005), have identified teachers as one of the most important inputs to the education system. The efficient management and utilization of this resource, therefore, remains critical to the quality of the learning outcomes. This shortage is likely to increase with the change of government policy to recruit 5,000 teachers annually as provided by the Medium Term Plan II (MTP II). Consequently, in view of the current teacher shortage and the employment trend, it is projected that by 2016/2017, which is the end of MTP II, more than 94,907 additional teachers will be required in primary and post primary institutions (TSC, 2014-2015). The government should therefore prioritize investing by expanding the budget provision in its budgeting cycle to urgently address this phenomenon.

In order to mitigate teacher shortage the government through the Teachers Service Commission has been carrying out teacher recruitment and replacing those who leave service through natural attrition every year. Recruitment of teachers has been decentralized to TSC County offices for

primary schools and Board of Management (BOMs) for post primary Institutions. The number of teachers under employment by the end of 2014/2015 period was 249,060 against an enrolment of 13 million learners in both public primary and post primary Institutions. The high rate of teacher rate of teacher attrition, calls not only for quick replacement but also an in depth analysis to determine and predict its effect on demand in order to safeguard against shortages.

A clear teacher demand framework will be necessary not only to rationalize teacher utilization but also to guide in meeting the targets for SDGs in education and Kenya's Vision 2030. The vision for the education sector for 2030 is ''to have globally competitive quality education, training and research for sustainable development''. This vision can only be achieved by focusing on the key strategic areas, namely access, quality, science, technology and innovation have been identified for support based on their impacts on the economic, social and political pillars (GOK, 2007).

Table 1.1 Recruitment of Teachers (2014/2015)

Number of teachers recruited	Primary	Post Primary	Totals
No. of additional teachers	2,479	2,521	5,000
No of replacement teachers	7,141	2,552	9,663
Totals	9,620	5,043	14,663

Source: Teacher Management Directorate

There was a significant increase in the number of replacements in 2012/2013 from 2,091 to 8,392 in 2013/2014 due to the retirement of teachers who had benefitted from extension of retirement age from 55 to 60 years as from 2008.

Table 1.2: Trends in teacher recruitment in the last three years.

YEAR	Additional teachers	Replacement teachers
2012/2013	10,000	2,091
2013/2014	5,000	8,392
2014/2015	5,000	9,663
TOTAL	20,000	20,146

Source: Teacher Management Directorate

Although the Commission has over the years made a deliberate effort to bridge the gaps in teacher establishment across the country, there is still a deficit in excess of 85,000 teachers. This is occasioned by increasing enrolment in primary and post primary institutions, expansion of the existing schools and registration of new ones. This situation has resulted in high Pupil Teacher ratio which comprises the quality of education. To bridge the shortage, there is need to recruit 20,000 teachers annually for the next five

years to adequately address this deficit. This calls for additional funding (TSC Annual report, 2014/2015).

Perhaps an attempt to answer the following questions could give a deeper insight in the teacher shortage and recruitment as posed by Digolo (2013).

- *Why are trained and qualified Primary and Secondary teachers not recruited, employed and posted to schools which are experiencing teacher lacks dating back to more than five years?*
- *Why is there lack of equitable distribution of teachers across the country as per the government policy and the mandate of the Teachers Service Commission?*
- *Why are their untrained teachers teaching in the Kenyan Primary, Secondary and tertiary classrooms while there are qualified professionals who are still unemployed?*
- *Why are some graduate teachers from colleges and universities get employed immediately they leave training institutions while others stay for years (5 years or more) before they can be absorbed?*
- *Why do some graduates get posted to Counties/Sub- Counties in which they do not reside while others are denied citing residence in those places as a criterion?*

PROVISION OF QUALITY EDUCATION
It is often asserted that children's future, and with it the development of the Nation State, depend, to a large extent. On the education system and the skill and dedication of its teachers. Perraton (2005), reminds us that good education demands good teachers and yet and yet in many countries (particularly the developing countries) teachers remain poorly educated, poorly paid and all too often poorly regarded. As moves for greater accountability and quality delivery gain momentum in the public and private sectors, attempts to assess the performance of teachers in a number of different countries have been made. Kenyan teachers have not been exempt from these pressures. Traditionally, Kenya and other developing countries, unsystematic appraisal has long flourished (covertly and unfairly) based on impulse, prejudice and incorrect or inadequate data (Wanzare, 2002).

Within the framework of imposed and intentional changes that have taken place in Kenya's educational system, formalized procedures for the appraisal of teachers' performance are viewed by educators as logical and essential for accountability, quality improvement and best practice. These views shared with Hattie and Clinton (2008) who argue that "the major advantage of assessing teachers is the demonstration that the profession can identify, value and reward the very best ". International research reveals that appropriate appraisal schemes have the potential of improving

professionalization of teaching, the effective management of schools, the quality of education provided for the students, the professional development of teachers as well as satisfying legitimate demands for accountability (Odhiambo, 2005).

In executing its expanded mandate, the TSC has developed a roadmap to achieve its reform agenda. Top on the list is provision of quality education. This agenda is embedded in the new TSC vision and mission statements, that is;

Vision: To be a transformative teaching service for quality education.

Mission: To professionalize teaching service for quality education and development.

In order to achieve this objective and in line with the government policy, the commission has adopted a Result Based Management (RBM) approach that focuses on performance, efficiency, effectiveness and accountability for results. Performance management (PM) is a goal oriented process directed toward ensuring that organizational processes are in place to maximize the productivity of employees, teams, and ultimately, the organization coupled with strategic leadership with the aim of transforming the service. It is a major player in accompanying organizational strategy in that it involves measuring and improving the value of the work force. Performance Management includes, incentive goals and the corresponding incentive values so that the relationship can be clearly understood and communicated. There is a close relationship between incentives and performance (Houghton, 2010).

The Performance contracting and Teacher Performance Appraisal and Development instruments will be critical in creating a performance oriented culture, measuring and evaluating performance and linking reward to measurable achievements. The TSC Code of Regulation for teachers (2015) Part IV (52) says that, the Commission shall develop an open performance appraisal system for teachers in its employment to strengthen supervision and to continuously monitor the performance of teachers in curriculum implementation at the institutional level. The commission therefore has a mandate to facilitate Teacher Professional Development (TPD) for teachers as provided for by TSC Act. Further, section 35(2) and (b) of the Act and the Government Policy Framework Session Paper No.14 of 2012 state that all teachers are required to undertake professional development courses as prescribed from time to time.

The performance appraisal system was rolled out to all schools in January/February 2016 after being piloted in six counties (Kitui, Nyeri, Kwale, Samburu, Uasin Gishu and Kisumu) beginning August 2013. It was known as Teacher Performance and Integrity Programme in Kenya funded by Britain's DFID to the tune of Kshs 250 million. About 500 public primary

and secondary schools have benefited (TSC Annual Report, 2014-15) from the program. The appraisal system enables the commission to identify the gaps facing teachers with challenges to improve. Various reports indicate that poor supervision in schools have led to teacher absenteeism and desertion, besides the low levels of numeracy and literacy among students and even teachers inability to understand the curriculum. Teachers and field officers have been sensitized on the performance Contract and Appraisal but there still exists challenges in the implementation which have to be addressed and as it is argued says, teacher appraisal process often faces problems associated with lack of agreement on appropriate appraisal criteria, concern over the validity and reliability of evaluation methods and the negative perceptions of teachers towards the appraisal system (Peterson, Cross, Johnson, & Howell, 2000). The system has experienced several challenges namely:

- ***Understaffing****. Lack of enough teachers has hampered the appraisal system as it's not possible to achieve targets with lack of enough manpower. Most teachers are overworked and therefore cannot deliver as expected.*
- ***Targets****. Setting of low targets.*
- ***M&E****. This is still not being done as expected due to lack of transport, inaccessibility of some areas and officers being in charge of vast areas.*
- ***Trade unionism.*** *The teachers unions KNUT and KUPPET has persistently resists performance contracting for fear that many of their members would face numerous disciplinary actions. They have been however been assured by the Teacher Performance and Integrity Performance and Integrity Programme in Kenya that the appraisal system would focus on corrective support development of a teacher.*
- ***Lack of computer Literacy****. Despite the sensitization of teachers and field officers little has been done in respect to those who are not computer literate yet every teacher should fill his appraisal online then appraised online.*
- ***Poor infrastructure.*** *Some areas have no network forcing both the teachers and officers to go for long distances to appraise and be appraised.*

The Commission has further allayed the fears of teachers by giving them facts about the performance contract and appraisals in the following ways as stated in the TPAD Manual (2016).

Table 1.3: The Facts and Fallacy

FALLACY	FACT
Performance contracts will change terms and conditions of service for teachers from permanent to contractual.	Terms and conditions of service for TSC employees on permanent and pensionable terms will not change. Performance contracting and appraisals are ways for monitoring the performance of teachers as stipulated in the TSC Act.2012.
Performance Contracts are meant to victimize.	Performance Appraisal seek to improve performance of schools and learning outcomes
Performance contracts will not guarantee teacher promotions.	Performance Contracting and appraisals will help TSC in making key management decisions such as assignment of teachers, deployment to administrative positions, promotion and appropriate training programmes.
Conditions set in the Performance contract may not be attainable (e.g. infrastructure improvement)	The Performance contracts for head of Institution are negotiated before signing and will thus take into account other prevailing conditions.
Performance contracts are meant to intimidate teachers.	The process will identify individual performance gaps of teachers and provide support for professional development to address the identified gaps.
The Contracts are being implemented in a hurry without consultations with stakeholders.	This process has been successfully piloted for three years in schools across the country.
This is a ploy by the TSC to diffuse salary demands by the teachers.	Salary and other terms of conditions of service are determined through negotiations and guidance of the salaries and Remuneration Commission, and not through the contracts and appraisals.
Through the process, schools with higher mean scores will have an advantage over smaller schools.	Targets to be achieved are arrived at after taking into account the broad teaching learning context such as available resources, entry behavior of learners, existing facilities and general teaching and learning environment.

Source: Teacher Performance Appraisal and Development (TPAD) Manual, 2016

PROFESSIONALIZING THE TEACHING SERVICE

The commission recognizes that a teacher is an important community and opinion leader. The TSC Act 2012, section 23 (1) requires the commission to register all qualified teachers and that only registered teachers should be allowed to teach in both public and private schools in Kenya. The objective of teacher registration is to establish and maintain in the standards on professional qualifications and competencies within the teaching service by ensuring that all teachers comply with the teaching standards (TSC Annual report, 2014-2015). The teacher registration and certification process has undergone major reforms and teachers can now register online on the TSC website.

Digitization process have also seen all teaching jobs and advertising for promotions done on the TSC website **www.tsc.go.ke.** The TSC Act also empowers the commission to exercise disciplinary control over any person registered as a teacher. This had not been provided for before and the teachers outside the TSC employment were not subjected to the provisions in the Code of Regulations for Teachers. Under the new mandate, the commission will exercise disciplinary control over teachers in private and other learning institutions, particularly in regard to Registration and De-registration. Section 30(1) of the Act provides for de-registration of teachers who fail to comply with the professional standards. Offences that may lead to de-registration include but are not limited to; committing an offence against a learner, obtaining registration fraudulently and conviction of a criminal offence.

This process has however faced some challenges such as;

- *The registration is done online yet some teachers are not computer literate. They are forced to use the cyber cafes for registration leading to lack of confidentiality.*
- *Some schools especially in the Arid and Semi-arid Land (ASAL) areas are have limited choice but forced to employ teachers who are not registered due to lack of registered teachers in the areas. In addition, the private schools have not enforced this rule and this makes such teachers to escape being punished when involved in disciplinary cases. Following the introduction of online teacher registration, 34 teachers were de-registered on account of various disciplinary offences (TSC, Manual, 2014-2015).*

According to Digolo (2013), there is still a perception by some teachers that this should only apply to teachers in public schools thus a large number are still not registered. They do not have TSC payroll numbers. The TSC though has a legal provision to register teachers, lacks an appropriate legal mechanism to ensure that all persons involved in teaching are qualified. Subsequently, several issues/questions emerge like;

- *Why are ECDE teachers, adult education teachers and teachers of alternative provision of basic education who are trained not registered by TSC?*
- *Why are most teachers who are qualified serving in private schools not registered?*
- *Why are some trained teachers employed by primary schools committees and Board of Managements not registered?*

Solutions will only be found if the above questions are answered then the issue of employing unregistered teachers will have been addressed. Investment in human capital is an important ingredient to the realization of the country's development goals. Quality human resources in the education

sector is a key factor not only in terms of resources utilization in the sector is a key factor but also in the setting of standards.

PROMOTION OF TEACHERS

Promotion of teachers should be above board all the time. It should be based on criteria that all teachers are conversant of as part of their terms and conditions of service. The criteria should contain elements that are observable, measurable and concrete. The criteria should consist of what is relevant and seen as contribution to the area of specialization. The Commission promotes teachers based on the requirements of the various schemes of service which provide for promotion through Teacher Proficiency Course (TPC), interviews and common cadre establishments or upon attainment of higher qualifications (TSC, CORE, 2015). This is based on the approved establishment and the budgetary provision (TSC Annual Report, 2012-2013). The purpose of promotion is to recognize or reward effort with the aim of improving quality of teaching, aligning employees for succession management, encouraging employees for succession management, encouraging employees to pursue higher qualifications and motivating employees to perform better in their duties and responsibilities (TSC Annual Report,2014-2015).

Although the commission has over the years continued to promote teachers, there are still over 13,565 teachers who have served in the same position in excess of 15 years without promotion (TSC Annual Report, 2014-2015). There are still many teachers who are due for promotion to various grades but cannot be promoted due to limited vacancies in the establishment and budgetary constraints. This has led to low morale, poor quality teaching and indiscipline among some teachers. Towards this end, there is need to provide more funding to address stagnation as indicated in Table 1.4.

Table 1.4: Teachers who have served in one job group for more than five years by 2013

S/No	Details	Job Group	Over 5yrs
1	Chief Principal	R	16
2	Senior Principal	Q	11
3	Principal Teachers	P	97
4	Principal Graduate Teacher II	N	3,636
5	Senior Graduate Teacher	M	7,454
6	Graduate Teacher I	L	12,411
7	Graduate Teacher II	K	456
8	UT Graduate Teacher/S1 Diploma/ATS III	J	133
9	UT Tech Teacher/ATS IV	H	22,629
10	P1	G	55,815
TOTAL			**102,658**

Source: TSC Directorate of Human Resource Management and Development

During the period (2014/2015), a total of 21,822 teachers were promoted to various grades but compared to the above figures, this is very minimal to compared to the population in question.

Table 1.5: Promotion of Teachers

S/No	GRADE(JOB GROUP)	NO.OF TEACHERS PROMOTED		TOTAL
		PRIMARY	POST PRIMARY	
1	M-N(Interview)	666	3,679	4,345
2	L-M(Interview)	510	-	510
3	K-L(Common Cadre establishment)			8,954
4	J-K(Common Cadre establishment)			3,679
5	H-J(Teacher Proficiency Course)	1,851		1,851
6	G-H(Teacher Proficiency Course(TPC)	2,483		2,483
	TOTAL			21,822

Source: Human Resource Management Directorate

From the Table 1.5 figures it therefore it follows that promotion of teachers has been a big challenge to the Commission with some teachers serving in the same grade in excess of 20 years. Lack of promotion creates low morale and lack of motivation to work which compromises the quality of education. This is a sensitive area that can make the integrity of the commission questionable. It is an area which is likely to be contentious and TSC though having the mandate may have to collaborate with other stakeholders such as Council for Quality Assurance and Standards, the County Directors of Education (Ministry of Education), Kenya National Examinations Council and Kenya Private Schools Association among others. There is also the need for National Treasury to deliberately adjust budgetary estimates to expand the establishment.

TEACHERS CONDUCT AND PERFORMANCE

The objective of exercising disciplinary control over teachers is to enhance professionalism and integrity in the teaching service. This is achieved through enforcement of the Code of Regulations and the Code of conduct and Ethics for teachers and the Secretariat staff (TSC Annual Report, 2012-2013). The discipline function in TSC is conducted through established discipline panels comprising of TSC Commissioners and Secretariat staff (TSC COSE, 2015).

A significant number of indiscipline cases arise out of ignorance of the rules and regulations governing the conduct of teachers and secretariat Staff. Indiscipline in the teaching service also manifests itself in different forms with the most common being desertion, absenteeism, negligence of duty and professional misconduct.   In the 2012/13 period, 1027 cases. In the period 2007/2008, a total of 1,331 cases were presented for hearing which included 1,088 fresh interdiction, 120 cases brought forward from the previous year, 13 secretariat staff cases and 10 review cases which had been presented to Teachers Service Appeals Tribunal (TSAT). A total 1,286 cases were finalized out of this number which translates to 96.6% against a target of 97 % (TSC Annual report 2007/2008). A total of 1187 cases which include 160 pending cases from the previous year were finalized (TSC Annual report, 2012-2013). During the period 2014/2015, the Commission Registered 983 discipline cases compared to 1,185 in the previous year. This reflects a decrease of 147 cases which is attributed to improved supervision through the TSC County Directors. In addition, 1,204 which include 221 pending cases from the previous year were finalized (TSC Annual report, 2015/2015).

Teacher discipline has also bedeviled with a number of challenges such as;

- *Delays experienced in the determination of cases on financial malpractices presented without the mandatory final audited accounts by Ministry of Education for Secondary Schools and Annual Audit Report for primary Schools (TSC, Annual report, 2008/2009).*
- *Hostile and uncooperative witnesses (TSC, Annual report, 2008/2009)*
- *Defective interdictions by field agents and inadequate supporting evidence or delays in submission of the same contributed to delays in the dispensation of discipline cases increasing number of court cases instituted by teachers against disciplinary panel decisions posted a great challenge to the Commission (TSC Annual report,2014/15)*
- *Lack of technical capacity to investigate cases and interpret reports (TSC Annual report, 2012/2013) by the field officers.*
- *Failure by accused teachers and some witnesses to appear for the hearing (TSC Annual report, 2012/2013).*

The Commission has employed a pro-active approach by creating awareness of the provisions among teachers to help them internalize the same. Teachers who violate the provisions are subjected to fair corrective measures to ensure justice for both teachers and the learners. It is worth noting that teachers found guilty of transgressing this provision against learners, presenting fake academic or professional certificates and those convicted of criminal offences are dismissed from service and removed from

the Register of Teachers. The names are then published in the Kenya Gazette to guard against their re-engagement in any learning institution.

The Commission has taken several steps to ensure that a teacher is given fairing according to Regulation 145(6) in the Code of Regulations, (2015). The Investigating Panel shall, upon investigation process which shall include being:

- *Presumed innocent until proven that she/he has a case to answer*
- *informed of the allegation, with sufficient details to answer it*
- *Given at least seven days to prepare a defense*
- *Given an opportunity to appear in person before the Investigation Panel, unless her/his conduct makes it impossible for the investigation to proceed in his presence;*
- *Given an opportunity to appear in person before the Investigation Panel, unless his conduct makes it impossible for the investigation to proceed in his presence.*
- *Present when the witnesses are being interviewed by the Investigating panel;*
- *Warned that any incriminating evidence may be used against her/him during the disciplinary proceedings; and*
- *Given an opportunity to adduce and challenge and challenge any adverse evidence.*
- *According to regulation 156(1) of the TSC Code of Regulations for Teachers, 2015, where a teacher is aggrieved by the decision of the Commission in a disciplinary process, the teacher may apply for review to the Teachers Service Committee within ninety days from the date of the letter communicating the decision.*

Measures to address this transgression of the provisions to reduce the occurrence of indiscipline amongst teachers, an annual target of sensitizing heads of public educational institutions, field officers and the agents on teacher discipline was set. The purpose of the exercise was to educate the participants on the provisions of the Code of Regulations for Teachers and the Code of Conduct and Ethics (TSC Update, August, 2016).

LITIGATION

There has been a sharp rise in court cases instituted by teachers to challenge the Commission's decisions on discipline, transfers, and postings. Further, these matters also relate disputes arising from the general execution of the commissions mandates. Responding to queries on Nakuru Court case (1997) has become a major challenge (TSC Annual report, 2012/2013). A group of retired teachers from Nakuru who allege noncompliance on the part of the Commission/Government with a judgment which awarded salary

arrears and pension dues in accordance with the Judgment (TSC Annual report, 2014/2015). Government has since appealed the judgment in the Supreme Court. In the event that the court process ends in the favor of the retired teachers, the financial and policy implications of court decision will be enormous and may be unsustainable in both the short and long term.

INFORMATION, COMMUNICATION AND TECHNOLOGY INTERGRATION

TSC witnessed tremendous growth in ICT capacity between 2012/2015, which has contributed to effective cost management and reduction in duplication of effort in performing different tasks. The aim was to increase efficiency in operations and to ensure services are available to the teacher and other stakeholders on the TSC website (www.tsc.go.ke) and teachers' portal (www.teachersonline.go.ke; TSC Annual report, 2012/2013,2015/2015). Teachers are now able to access pays slips, apply for registration, promotion online, appraise and be appraised online and keep track on the progress (TSC CORE, 2015).

TSC is committed to improving its automation level in compliance with e-government guidelines. During the period 2014/2015, the Commission made remarkable progress in realizing automation in its key teacher management functions. This had a significant improvement and positively impacted on service delivery. Teacher Management Information System (TMIS) was developed to enhance efficiency in the management of teachers' data through data capture and harvesting at source aimed at creating a repository. Although the Commission has made great progress in automating its processes as required by the standards of the directorate of e-Government, there has been inadequate technical control for outsourced systems such as IPPD, IFMIS, thus causing frequent downtimes. Internal information systems are also separate and discrete which calls for their integration to place them on the same platform. Delay in digitization of records has also reduced efficiency in record management and hampered faster accessibility of files (TSC Annual report, 2015/2015).

There is need to increase the ICT budget to enable the Commission to achieve a higher level of automation to include a deliberate skill transfer program for internal technical capacity to effectively manage outsourced systems. A higher ICT budget is also needed for the development of a proper disaster recovery and business continuity plan, mitigating any data loss, integrating all information systems at TSC and proper digitalization of records to ease information retrieval for better service delivery and reduce cost on paper use. More teachers should be trained on ICT integration. So far 62,784 have been trained on ICT integration in primary education (TSC Annual report, 2015/2015).

MANAGEMENT OF HIV AND AIDS

In several countries, the education sector has already been profoundly affected by HIV and AIDS pandemic. In several counties, the education sector has already been profoundly affected by the disease. It is estimated that the number of teacher deaths in Kenya tripled between 1995 and 1999, with HIV and AIDS thought to be the largest contributor to teacher mortality (Kelly, 2000). An analysis by the International Labour Organization on the impact of HIV and AIDS scourge on human capital suggests that Kenya was second only to South Africa in the sheer number of teachers dying from HIV infection by 2010, which is far ahead of Nigeria, Zimbabwe and Uganda (Cohen, 2002). Most school-based interventions in Sub-Saharan Africa rely on teachers as behavior formation and behavior change agents to deliver prevention messages to children. Few target teachers are the direct beneficiaries although teachers themselves are at risk of HIV infection. In a study, Mumah (2003) found that 36 percent of married respondents had sex with more than one partner in the year preceding the survey among primary school teachers in Rachuonyo District Nyanza province, Kenya.

The spread of HIV/AIDS have devastating effects on teachers in developing countries for some time now. The pandemic greatly reduces the capacity of the system by increasing teacher attrition and absenteeism (World Bank, 2005). It also saps the system's energy by imposing additional demands on teachers as they provide support for ill students and students with ailing family members. In some countries in Africa, the number of teachers lost due to HIV/AIDS each year has been close to half the number trained for each year (Nilson, 2003). According to a study done by Njeru and Kioko (2004) in Kenya, overall teacher death increased from 1,216 in 1997 to 2,133 in 2003 due to HIV/AIDS which is phenomenon. The number of counsellors at the TSC headquarters is not adequate to deal with HIV and AIDS related issues nationally. In addition there is need for counsellors to be deployed in district sub-Aids control units (ACUs) to enhance awareness but there is no budgetary allocation for the provision of counselors in these units. The commission is still grappling with stigma and discrimination of employees living with HIV and AIDS both at TSC headquarters and Institutional level.

Several groups in Kenya have taken an initiative to take action to address this gap. The Ministry of Education, Science and Technology has made HIV testing services available to teachers at its headquarters (Daily Nation, 2006). The Kenya National Union of Teachers (KNUT), in collaboration with the American Federation of Teachers (AFT), is implementing HIV workplace programs for teachers in selected regions (Davies & Barimbui 2006). In addition, the Horizon program, in partnership with UNICEF, has begun an operations research project to test a model of

HIV prevention and care activities directed at teachers in schools. Specifically, the Horizons study is assessing changes in teachers' knowledge of HIV and AIDS, risk behaviors (e.g. multiple partners and unprotected sex), and utilization of voluntary counseling and testing (VCT). The Horizon operations research project is already underway in 120 schools. Named "Teacher Matter", the project revolves around a self-directed workplace manual developed by UNICEF. Horizons has prepared a series of brochures and other behavior change education materials specifically for teachers that address various topics such as HIV prevention; management of STIs and HIV, including opportunistic infections, care and support, and condom use. Program staff have distributed copies of the workplace policy and trained peer educators in each school to reach fellow teachers. These outreach measures have created awareness in the teaching fraternity in the country specifically in primary and secondary school levels.

The program is addressing four major areas namely: prevention, HIV status awareness, stigma, care and support. About 37 out of the 111 training participants underwent testing for the first time. The intervention started in April 2006. More VCT services have been made available during peer educator sessions. The workplace model aims to assist teachers who are infected with and affected by the disease by helping them to identify and access available treatment, care and support community resources. This update summarizes the results of the baseline survey conducted in October, 2004.

INDUSTRIAL UNREST

Teachers form a vital part of the workforce in any progressing society and without their influence and input, there would not be a proper avenue for learning and knowledge advancement therefore. Teachers' strike has a way of paralyzing the society and disrupting learning with disastrous effects to the economy. The first teachers strike was in the year 1962 just before the country achieved independence. Subsequently over a period of time there have been a total of 11 teachers strike. The second strike was held on October 1962. The grievance was that the teachers union wanted one employer for all teachers in the country. However, this issue remained unresolved leading to the third strike on November 1966 leading to the formation of The Teachers Service Commission (TSC) through a bill which was tabled in parliament by the then Minister for Education, Jeremiah Nyaga. The fourth strike in November 1969 saw the formation of the Teachers Service Remuneration Committee (TSRC). In October 1997 demanding for a 300% pay rise. Led by the late veteran unionist Ambrose Adongo where teachers threatened to paralyze not only learning but also examination dates. Another strike was witnessed in October 1998, with the

union blaming the government for refusing to implement the pay rise yet it they undertook implement the agreement through the president's committee. However on being promised, they went back to class only to strike again in October 2002 demanding their pay rise which they legally earned in 1997. The strike caused a major paralysis in the education system that lasted for two weeks.

The January 2009 strike was dubbed as the 'mother of all strikes' because almost 8million children were affected by the go-slow. The teachers wanted a sum of 19Billion to be paid but with a lot of persuasion by the government the teachers went back to school with a promise of pay 17.3Billion in phases citing hard economic times. In September 2011 teachers downed their tools yet again lamenting that they were inadequately staffed due to the influx of students/pupils due to the introduction of free primary education by the third president of Kenya, Mwai Kibaki's government. In July 2009 there was strike where the teachers demanded their 300% pay rise and responsibility allowance. The strike was held for 24 days and although it was ruled illegal by the Industrial court, the Teachers union leader, Wilson Sossion held his position and the teachers went on with the strike. The last strike was in September 2015 because the government did not honor Justice Nduma Nderi's 50-60 per cent pay. On October 3, 2015, the two teachers unions-Kenya National Union of Teachers (KNUT) and Kenya Union of Post Primary Education Teachers (KUPPET) asked their members to return to work bringing to an end a five week stoppage that paralyzed education.

The frequent disruption of teaching and learning in public educational institutions as a result of Industrial disputes related to teacher remuneration is a reality TSC must grapple with. To resolve this, a collective Bargaining Agreement (CBA) was signed on 25th and 26th October 2016 between TSC and the two teachers union. The CBA has established a new grading and salary structure based on the principle of "equal pay for equal work". This will now make it possible to retain the best professionals in public schools. It will witness the promotion of more teachers following the phasing out of the P1 entry grade in an agreement reached between the teachers' employer and their union representatives. The CBA agreement expands the grading structure of the top cadre of teachers. It has also created distinct career paths for all teachers in what is said to be a new paradigm shift in the remuneration of teachers meant to ensure that both the teachers in administrative and non-administrative positions have clear career progression paths.

This is the first ever Collective Bargaining Agreement (CBA) to be entered into by KNUT, KUPPET and TSC and negotiations have been going on since June 2016. It will bind the parties from 2017-2021. TSC Chief

Executive Nancy Macharia said detailed and comprehensive implementation modalities and timelines will be worked out before the commencement of the CBA which takes effect from July, 2017. The signing of the CBA therefore marks the era of commitment by both parties to address labour issues and other matters of mutual concern for Industrial harmony in the sector, "she said (Wanzala & Mwangi, 2016).

DEPLOYMENT OF EFFECTIVE TEACHERS LEADERSHIP POSITIONS

Globally, education reform focused on school improvement has been a key political agenda over the past few decades. Within the broad discourse, the preparation and development of school leaders has gained prominence primarily because of the perceived links between school leadership and school outcomes. Consequently, leadership preparation and development courses have been constructed as one of the major leverage points for policy makers and a topic of interest for scholars (Asuga, Eacot & Scevak, 2015). Where there is an established, and continually expanding programme on school leadership preparation and development in developed nations especially the USA and Britain in developing nations, particularly those in Africa, we are seeing an increasing emerging voice in the discourses supporting the view that effective leadership and management are essential to developing good schools (GOK, 2008).

Leadership is a very critical component in any organization because it provides an enabling environment for processes to be actualized. In Kenya, school leadership preparation and development has been recognized through the provision of courses offered by universities, systematic authorities, professional associations and consultants. However, school leadership preparation and development has been criticized for being ad hoc, haphazard and not responsive to the needs of the current and aspiring school leaders (Onderi & Croll, 2008; Wanzare & Ward, 2000). Despite these claims what remain under researched is the current provision for school leaders and any form of evaluation thereof. Unlike the USA, England and Scotland who have a formal system of certifying, licensing and credentialing aspiring leaders, Kenya has adopted a modified version of the "apprentice model" (Sue *et al*, 2003). Principals are traditionally appointed from serving deputy principals or assistant teachers without any specific leadership preparation or development (Kitavi & Van der Westtuizen, 1997). This method of selection has generated concerns on the basis that rapidly changing societal and education conditions requires the continuous development of staff to enable them acquire knowledge and skills necessary for their dynamic roles (Kindiki, 2009; Onderi & Croll, 2008; Onguko *et al*, 2008).

A pivotal reform initiative implemented by the Government of Kenya was the establishment of a national institute, the Kenya Education Management Institute (KEMI). It is mandated to provide educational leaders with competencies and bringing about paradigm shift among educational leaders and managers. However, a report on the Kenya Education Management Capacity Assessment (KEMACA, 2008) conducted by the Ministry of Education through funding from USAID. It reported that despite considerable financial resourcing, most principals feel that they have either not been prepared for their role or lacked key administrative skills even when they attended courses.

As a policy initiative, the Teachers Service Commission requires school administrators to attend a minimum of two development courses annually. The courses serve as a pre-requisite for recruitment or promotion to principal-ship. The TSC has already enacted regulations to ensure that teachers undertake career progression and continuous professional development programmes in line the market dynamics. This will ensure that all teachers including school managers such as principals, acquire the necessary skills in order to remain relevant in the respective positions. Towards this end, TSC is working with training institutions and capacity building agencies to develop modules to meet the requirements of section 35 of the Teachers Service Commission Act in compliance with teaching standards which states that the commission shall take all necessary steps to ensure that persons in the teaching service comply with the teaching standards prescribed by the Commission under this act (TSC Act, 2012). In his speech at the Kenya Secondary Schools Heads Association 38th Conference at Wild Waters Mombasa (17th June 2013-21st June, 2013), the Commission Chief Executive then Gabriel Lengoiboni said that the modules will be developed in a way to cater for the diverse career needs for different teachers .They will be organized in thematic areas such as the follows :

- *School Management and Finance*
- *Curriculum Implementation and supervision*
- *ICT and Counselling*
- *Guidance and Counselling*

The CEO then promised to review the policies on appointment of Heads of Institutions to make deployment to these positions performance based. This will ensure that only teachers with a proven record of good performance and the required training are appointed to positions of leadership. It is important to bear in mind those performance indicators such as the school's mean score, resource management, innovativeness and infrastructural development will play a key role in deployment decisions. The era of trial-and-error management style must come to an end.

3.0 CONCLUSION AND RECOMMENDATIONS

Candid reports in teacher management calls for result based approach and cost-benefit analysis in every decision made. We therefore recommend that capacity building be embedded in teachers' programmes for effective teacher management to achieve the following:

1. **Increase in productivity:** Teachers will be at their best productivity if they have supervisors who will help them improve on their areas of weaknesses if constructive feedback is given. This therefore will help the TSC improve its productivity and reduce teacher disciplinary cases in return. Leadership training that encompasses emotional intelligence will enhance these emotional skills in people management and leadership roles. Leadership is about understanding your people's emotions which is critical to the success of any leader. Emotional intelligence involves being smart about emotions and using empathy effectively to empower and engage employees in their teaching duties.

2. **Retention of teachers:** Some teachers who voluntarily leave employment do so because of their superiors, they leave ineffective leaders hence by investing in leadership training, supervisors and managers will be able to retain teachers and reduce recruitment costs. This will be beneficial to TSC and the government at large.

3. **Nurturing future leaders:** TSC need to be strategic about developing and nurturing future leaders. Nurturing future leaders supports succession planning and offers career pathways to teachers, further increasing retention. This will be of great benefit to TSC at large.

4. **Increasing teacher engagement:** We all like to know how we are progressing in our roles, receiving praise when it is well-earned and constructive feedback as necessary. High percentage of highly engaged teachers receive feedback at least once a week compared to a few of those with low engagement. Giving feedback is a skill of successful leaders. Through leadership training, you will learn effective ways to give feedback to motivate and increase the skill level of the teachers.

5. **Implementation an effective leadership style:** Leadership training will assist in implementing the most appropriate leadership style for the commission and the roles the supervisors perform. Consistent capacity building will also help individual leaders develop their own personal leadership style that their team members will best respond to.

6. **Better decision making:** Leadership training will result in better decision-making because leaders functioning at a high level of emotional intelligence have the perspective to make informed, intelligent business decisions. This therefore, will ensure that your leadership training investment is returned. However the TSC secretariat must also be tagged along during

these capacity building endeavors to help speak to the teachers' issues by use of best practice.

Bass (1990), submits that transformational leadership is characterized by several patterns of behavior. First, transformational leadership employs the charisma of leaders in order to gain the respect and trust of stakeholders and to instill pride in the latter. In addition, charisma highlights the provision of a common vision and sense of mission necessary for the transformation. The second distinction is inspiration through which leaders employ symbols to redirect followers' efforts; they express in a basic style the fundamental purpose of the transformation process, and clearly communicate the accompanying higher expectations. The third distinction is intellectual stimulation. Leaders intellectually stimulate employees by emphasizing rationality and creativity in problem-solving situations. Finally, transformational leadership offers individualized consideration where leaders treat employees individually offering them personal attention and, whenever necessary, they provide coaching and advise to those employees.

It is our informed opinion that, the supervisors will be able to understand the basics of sound management i.e. Clear objective setting, structured performance evaluation systems, honest and open feedback and communication with a human dimension. This will enable the commission to grow phenomenally and support the strategic objective as well as work towards the achievement of TSC mission to professionalize teaching service for quality education and development.

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Education and the Paradigm of Tolerance

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Abstract

Living alongside one another in a spirit of acceptance evokes the concept of tolerance that, from Erasmus da Rotterdam to Voltaire to Primo Mazzolari, calls upon us to understand that the only possible choice for mankind, from time immemorial, has been to educate towards coexistence within milieus that increasingly differ by culture, customs, ways of thinking and behaviours. Beliefs and concepts sometimes refer to values that may also be quite remote from and unlike ours and, as a result, our capacity to find points of contact with other persons becomes the condition, not only for survival, but for growth itself as a human person. To know how to interpret and yet keep one's own points of reference is a constant challenge to our intelligence guided by the will to do good. The concept of free will is based precisely on the strength of the human will, driven to dedicate itself to whatever safeguards, or to turn away from the search for salvation. Freedom cannot exist if we replace it with new absolutisms and mental blocks that hinder the realisation of that growing humanisation plan, founded on responsibility and care. This paper broaches the subject of the relevance of education to tolerance: on one hand, a plan for detecting the limits within us and, on the other, the need for creating a human community, with the purpose of defining a common interest to live for and commit ourselves. So, it is a matter of choosing whether to live through another cold war or shift towards much more promising horizons of encounter and solidarity.

Introduction

Among the most enlightened minds, still recognised today as the progenitors of European humanism, Erasmus da Rotterdam is most assuredly to be remembered as he who raised his voice in support of freedom of intellect and a choice of peace, already in the sixteenth century, an era of great religious conflicts. As Henry Kamen (1967, p. 24) recalls, Erasmus (in

1523) maintained the inescapable choice of man, the choice of peace and harmony, overstepping any and every intolerance for religious reasons, in the expression *Summa nostrae religionis pax est et unanimitas*. During his lifetime, this great humanist showed how cultivation of the humanities was the true source of purification of the Church, which should doubtlessly be freed from the dogmas that were forcing it into confines of superstition and fanaticism. Disputes could not be acknowledged, even if they were the work of princes and, as he usually proclaimed, instead of war, one should learn to use the pen. War was a lack of search for fraternity and ideologies intensified the differences to the point where even those who talked about following the teachings of the Gospel, like the reformists, were open to behaviours that were anything but motivated towards agreement.

Nonetheless, although recognising the limitations of Luther, Erasmus did not believe he was to be persecuted and treated with force. The cities engaged in fighting should not destroy each other, but rather, and preferably, each group should stay within its own territory until there was a meeting of the minds in a healthy compromise for living without killing each other. Hence, overcoming dogmas and converging around essential truths could be the prerequisites for a peaceful life, in which religion was not the cause of hostility and intolerance. Allowing for free and open discussion amounted to permitting everyone to express positions that might enable a path towards agreement, assuming this was the common objective.

What often happens is that, when a difference of views occurs, one opts for the view that the majority deems fairer and also true. As concerns free will, Erasmus led the discussion about this subject-matter, with respect to which it is good to confirm or deny fundamental truths. He asked the reader to evaluate the topics he proposed, either in favour or not of some theories, hereby taking into account that some thoughts came from judgements expressed by scientists, saints and theologians, while others represented judgements expressed by "any person or two" (Erasmus, 1989, p. 12). One might also wonder if it is the quantity or, rather, the quality that should guide our judgement and, thus, our decision. We question ourselves about the weight of the ideas and examine whether it is commensurate with the number of votes, or if it is founded on the correctness of what such ideas express or convey. The object of the choice is frequently neglected and we let ourselves be guided by the stance of some people who, if they are eloquent and captivating, with a certain dose of demagogy, could persuade us towards affirmations that our reason, when calm and free, would never accept. If numbers should prevail over quality, this would not automatically mean that the better choice has been made. For convenience sake, the majority may approve something that does not correspond to the search for truth; for this reason, persons, such as teachers and educators, are required to

assure an action of revelation and prophecy. If we were all informed at birth, there would be no reason to live together, meet and reach common views that allow for interpretations with meanings that may approach the plan for eternal salvation. On the other hand, if everything were so clear and easy to understand, there would be no need for discussion and education to tolerance.

Risks of superstition

In his treaty on tolerance, Voltaire (1763) showed how a single voice thrown into an angry crowd can instigate situations of negligence, even by those in authority whose task it is to dispense justice, as divine as it is human. How can one leave a majority that condemns the innocent and even governs those who should guarantee the respect for civil, human and social rights? Knowing how to distinguish between superstition and being able to choose the direction of respect and fraternity is the capacity Erasmus was talking about from another perspective. Weakness of minds, lack of culture, ignorance and prejudice, non-preparation to judgement calculated on facts and documents, and fanaticism may lead to simply considering anyone who does not think along the same lines guilty of a misdeed.

The call made by Umberto Eco (2012, 1990) to negative realism likens to a new confirmation of what is defined as a healthy search for the truth, starting from the interpretation of a fact that could repudiate some of our interpretations, from which, most probably, we could never definitely separate ourselves. Being willing to rethink and steadily adjust becomes a relevant strategy for surpassing the risks of modern absolutism that go from the intolerance of tolerance to the invariable interpretation of tolerance. One might ask oneself if the search for truth is solely a matter of interpretation or if, rather, it also requires a capacity for non-prejudicial and non-superstitious reasoning. In truth, even in the novel *Il nome della rosa* (1980) we find Eco's choice to liberate a manuscript from obscurity and, with it, a bit of history, unquestionably marked by the horror of the inquisition, but also by the intellectual forces that opposed its manifestations. The story of Adso da Melk leads us by the hand in discovering truths that the wisdom of the teacher, William of Baskerville, reveals, as if they were quite obvious, but passed unobserved by minds and feelings frozen by the inquisition. An example of intolerance masked by religious belief and the conviction of being the sole, eternal guardians of knowledge meant for only a few. And so, while the Abbot explains the divine mission that consigns custody of the word of God to the monks, William ingenuously concludes with a pragmatic, simple question-phrase that makes one smile that can be summarised in the unexplainable prohibition to access culture in the name of faithfulness to the sacred.

"<If God has now given our order a mission, it is to oppose this race to the abyss, by preserving, repeating and defending the treasure of wisdom our fathers entrusted to us. Divine Providence has ordered that the universal government, which at the beginning of the world was in the East, should gradually, as the time was nearing fulfilment, move westward, to warn us that the end of the world was approaching, because the course of events has already reached the confines of the universe. But until the millennium occurs definitely all, until the triumph, however brief, of the foul beast that is the Antichrist, it is up to us to defend the treasure of the Christian world and the very word of God, as he dictated it to the prophets and the apostles, as the fathers repeated it without changing a syllable, as schools have tried to gloss it, even if today, in the schools themselves the serpent of pride, envy, folly is nesting. In this sunset, we are still torches and light, high on the horizon. And as long as these walls shall stand, we shall be the custodians of the divine Word. > <Amen,> said William, in a devout tone. <But what does this have to do with the fact that the library may not be visited?>" (Eco, 1980, pp. 44-45).

Going beyond the textual narration, what dominates the subject is the strong opposition between those who deem themselves guardians of great missions and impose them on others, scrupulously and violently, and those who humbly follow the will of God, choosing the path of poverty and doubt. We would not seem to be faced with a problem of interpretation, but rather, we sense the depth of that inner question that is attempting to understand what frees from fundamentalisms and what opens the mind to the truth that shapes the human person.

The limits of tolerance

Voices have been raised to defend the limits of tolerance. As Philippe Sassier observes (2000, pp. 166-169), the distinction between tolerate and leave it as is does not mean the same thing. Hunger and poverty are not to be tolerated; injustice and persecution are not to be tolerated; indifference and passiveness when faced with evil are not to be tolerated.

The path of man and philosophical thought indisputably leads to the principle of universal tolerance. However, rationality is not enough to understand many of the human problems and we regretfully note that, due to a lack of balance, feelings sometimes guide us more than reason, without neglecting that matters given over to reason do not always render choices of death or violence plausible. Tyrannies claim to act rationally and justify interventions that end in mass murder and the privation of human rights in the name of a faith, a belief or defence of identity. Actions and interventions that would not be allowed in other contexts. What has been happening in Nigeria since 2001, caused by local groups, such as the Islamic

fundamentalist organisation Boko Haram, represents the decline of religion, used to justify violent actions that reduce the human person to a state of submission, obedience and slavery, by taking advantage of the weakness of defenceless young people, abducted and forcefully removed from the safety of their families and lifelong communities, if not actually killed.

For years, Shirin Ebadi (2006), awarded the Nobel Peace Prize for his commitment to defending human rights and supporting democracy, has been repeating the value of schools and education against ideologies that kill, such as what is also happening with Isis. In parallel, intolerance results in as many legal and criminal occurrences as violations of religious freedom and the dignity of being human, which reach possible reparations and even extreme consequences. There is evidence of this in both the experience of Meriam Yehya Ibrahim, accused of apostasy and then freed (2014), and the tragic end of the spouses Shama and Shahzad Masih (Pakistani Christian Association in Italy, 2014) burned alive on 4 November 2014 because they were Christians. Prior to this, the assassination of Shahbaz Bhatti, Minister of Minorities in Pakistan, on 2 March 2011, had raised indignation throughout the world (Bhatti, 2008; Milano, 2012) and made it clear that dialogue among religions was still delicate and fragile. The political use of religion for the purpose of asserting ethnic and national identity is going through a new critical phase that challenges a much-discussed relationship between politics and religion. The law makes this relationship possible on a footing of social equality and non-discrimination, for both cultural and religious reasons. In his *Letter Concerning Toleration,* John Locke abundantly describes the risks of religion becoming a "pretext" for committing injustices:

"Nobody, therefore, in fine, neither single persons nor churches, nor even commonwealths, have any just title to invade the civil rights and worldly goods of each other upon pretense of religion. Those that are of another opinion would do well to consider with themselves how pernicious a seed of discord and war, how powerful a provocation to endless hatreds, rapines, and slaughters they thereby furnish unto mankind. No peace and security, no, not so much as common friendship, can ever be established or preserved amongst men so long as this opinion prevails, that dominion is founded in grace and that religion is to be propagated by force of arms". (Locke, Translated from the Latin by William Popple, 1689, p. 15).

There is no shortage of signs of the international recognition of the need for encounter, as the exercise of a universally recognised right, if one thinks that, just now, in 2014, the Nobel Prize was awarded to Malala Yousafzai (2013) for peace and the defence of the rights of children, referring, in particular, to women's rights to education: a statement that tolerance is not exclusively a question of good sense, but also the sole reply to a civility that is vastly shared for our survival. It is an educational action

for the formation of consciences towards a constitutional culture that democratic countries choose to pursue, as a preferred path of social responsibility and participation in the continuation of our existence.

For an alliance between law and culture

In schools, the study of the *Constitution of the Republic of Italy* (1948), on a theoretical level and its practical implications, constitutes a guarantee for the awareness and acquisition of the competences required for implementing those principles that represent the formalisation of national awareness and the joint focusing on common; worldwide goals of recognising the dignity of the human person (Corradini, 2014). Referred to, more specifically, is Article 3 of the Constitution that states: "All citizens have equal social dignity and are equal before the law, without distinction of sex, race, language, religion, political opinion, personal and social conditions. It is the duty of the Republic to remove those obstacles of an economic and social nature, which constrain the freedom and equality of citizens, thereby impeding the full development of the human person and the effective participation of all workers in the political, economic and social organisation of the country", and Article 8 that emphasises how: "All religious denominations are equally free before the law. Denominations other than Catholicism have the right to self-organisation, according to their own statutes, provided these do not conflict with Italian law. Their relations with the State are regulated by law based on agreements with their respective representatives". On this subject, and from an international standpoint, we draw on three points in Article 26 of the *Universal Declaration of Human Rights* (1948), which reads: "(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. (3) Parents have a prior right to choose the kind of education that shall be given to their children" (Centro diritti umani, 2008, p. 51).

It can definitely be said that as much the constitutional charter as international recommendations, indicate the horizon value to be followed to make tolerance a way of thinking, in which the right of education means knowledge and exercise of human rights. In describing the evolution of tolerance from Erasmus to John Stuart Mill, the academic David Merli

(2003, pp. 389-391), reaches the conclusion that religions tend to increase with a parallel growth of diversification, rather than unification. The multiplication could be a sign of vitality, but it could also forge a passage to new conflicts. From this point of view, the analysis is augmented by the universal message spread by the Church, which, particularly during the Second Vatican Council (1965), called for the tolerance of Catholics for everyone, even atheists, since everyone contributes to building the world in which we live and, for this purpose, dialogue is to be considered a plausible, shareable form, through which the right position for the fundamental rights of the human person can be found. It follows that the pledge to live the right to life, the right to education and the right to peace and justice can never be considered depleted, but, rather, is to be rendered vibrant in the closest and farthest human vicissitudes. According to Gianni Manzone (2004, pp. 7-16), multicultural societies are the ones that feel problems of tolerance the most, due to both the pluralism of values and the asymmetry of the distribution of power (Galeotti, 1994). The only possible path is that of dialogue, as much interpersonal as institutional, in which taking care of the person implies interpreting his or her past experience, not limited to the historical and social contingency, but aimed at a project of universal transcendence.

The condition for living together

At the end of the Second World War, Primo Mazzolari reflected on the need for tolerance that originated in the past in a Europe troubled by religious struggles. Whether due to scepticism or Christian charity, people felt that hate in the name of a creed and a profession of faith could not continue to be nurtured.

This issue was brought up again whenever the divisions caused a distancing from a common point of contact. In fact, if we were able to define a general interest around which we could all converge, without worrying about our particular passions and specific desires, the necessity to pursue and spread the culture of tolerance would drop away. Reality, however, is quite another matter.

We continue to fight wars and sign treaties. It seems hostilities divide us more than friendships bring us closer. The language is the same, and yet, what we feel inside carries us to raise borders and walls. As the divisions escalate, we perceive how indispensable it is to turn to what can unite and no longer separate us. This allows us to live in our essentiality, without feeling threatened by peremptory, devastating judgements. It is where the understanding of tolerance begins, as a *forma mentis* that prepares thinking towards the other as thinking aimed at good. Mazzolari wrote that tolerance, which "could also be called 'the effort to think good thoughts', as Pascal put it, is the condition for living together" (2013, p. 58).

If freedom was missing before, what is now missing is tolerance, in which the principle of equality of all men is affirmed both before God and in interpersonal relations. We were created as equals, but unlike one another in personality; we are thus dissimilar. The profile of a tolerant person is a person who sees and accepts equality as much as dissimilarity. We are equal by dignity and respect, but different by emotions, feelings, thoughts and personalities. The profile of the intolerant person is a person who is devoid of a sense of equality and would like everyone to be modelled the same way, shaped with precision, making it possible to overcome the unpredictability and surprise that arise from dissimilarity.

From a political point of view, we can observe that a tolerant government recognises the equality and dissimilarity of its citizens, chooses respect for freedom, is the government of a population that actively participates in defining and observing the laws and is the government of democracy. Vice versa, an intolerant government is run by one, or a few persons, denies equality and suppresses dissimilarity, forcing everyone to conform, and abolishes creativity and spontaneity; it does not heed the authenticity of behaviours and the value of the uniqueness of each person. The tolerant government may also not be as ordered and disciplined as the intolerant one, but it is worth more, because it is founded on human respect; it is a vital government, in which peace springs from trust and does not fall to pieces due to the consumption of a rule and the intolerability of unshared impositions.

If the States require a philosophical project for eternal peace, as Kant hypothesised, we as people, need a natural agreement of tolerance, as Mazzolari foreshadowed (2013, p. 117). At this point in our thinking, we can definitely say that, today, the subject, problem and choice of tolerance acquire an unbounded extension that cannot be confined to an option of resolution of religious, political and ideological conflicts. This is an option of vast proportions that entails both commonality and taking up a position against revived racisms and reiterated social injustices.

Tolerance is also what makes us compassionate with ourselves and others. It is feeling mercy and pain that makes us accept limitations so as to understand that to offer hand or ask for help are profoundly human actions in a host community. Such actions enable warding off the destruction of those who are often rejected, because they are weak and helpless, and have no say, and yet have a life to be expressed in full. Solidarity starts with a sense of charity that does not sustain situations in which persons must submit to a way of thinking that crushes them and does not free them. Mazzolari's message anticipates what the core of rebuilding the value of the person was, in a society subjected to destabilising forces, as well as human identity and

the stability of being God's creature, during the years following the Second World War.

Conclusion: Our intellectual duty

The course of reflection followed in this essay has taken moves from the proposition of the subject of choice, understanding it as the ability to distinguish between the many paths of the mind and heart, having a preference for those oriented towards the realisation of what is congenial to human nature, since they are consistent with the path of civilisation to date and with the idea of tolerance on which our coexistence is based. If the authority of the texts written by well-known academics, as Erasmus sustained, has its reasons to be in the cultural heritage that accompanies us, it is true that within that limitless mass of knowledge we find traces of acceptance of those who do not think as we do and, because of this, cannot be treated as a person condemned to death by courts of men and laws they enact, as Voltaire sustained.

The truth has been revealed on a religious plane, but it is to resurface, day after day, as a wealth of the experience that resides in the inner life of others and that my interpretation, our interpretation, is manifested by continuous discoveries and not once and for all. Along this path, Eco leads through the labyrinths of the Middle Ages and post-modern times to show both the depth of knowledge and the risks of its limitations.

Culture is the name given to those forms of social living that become the roots of our national and cosmopolitan identity. An identity, not a dogma, subject to constant reformulations, always aided by more imagination and fertile creativity, the more the better as we learn to cultivate our humanity. Within this scenario, the call of Martha C. Nussbaum (1997) can be sustained, when she writes:

"People from diverse backgrounds sometimes have difficulty recognizing one another as fellow citizens in the community of reason. This is so, frequently, because actions and motives require, and do not always receive, a patient effort of interpretation. The task of world citizenship requires the would-be world citizen to become a sensitive and empathic interpreter. Education at all ages should cultivate the capacity for such interpreting" (p. 63).

Alongside the pedagogical meaning of education to tolerance, such as the acceptance of ideologies, faiths, systems of life different from one's own and recognition of their validity (Ricciardi Ruocco, 1962, p. 42), we must needs consider the problematic transition, which shifts the analysis from a religious plane to a secular plane. Thus, in noting the great variety of forms and expression of tolerance, we see how their vastness merges into new interpretive contexts that adopt, as binding, not so much the sharing of

pluralism as the state of the multicultural society, a challenge to tolerance and promise of tolerance. This way, the subject of multiculturalism, examined by Michael Walzer (1997, pp. 147-153), as a political arena of both economic and social equality, represents an opening for the debate, so as to recognise how many obstacles there still are prior to the realisation of a project, in which we can coexist in full respect of the human dignity of each and every person. The nerve centre of this tolerance is the recognition of the differences of groups through the proposition of programmes for putting aside those possible new discriminations of an economic nature that, in the name of poverty, lead us to again give voice to our intellectual duty to choose the good and shun the bad.

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Factorial Invariance of Self-Efficacy in the Sociocultural Sphere Scale on Men and Women University Students

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Abstract

The present study analyses the psychometric properties of the Self-efficacy in the Sociocultural Sphere Scale in men and women university students. The overall sample consisted of 1545 subjects: 616 women and 929 men, with a mean age of 18.11 years (SD= 0.69) and 18.27 years (SD= 0.75) respectively. Psychometric analysis showed that two-factorial structure (promotion of the culture and cultural identity) was viable and adequate for both populations (men and woman) according to the established psychometric requirements when the informers are the students themselves. The results showed that factor structure, factor loadings and intercepts of the instrument could be considered invariant across groups; however, there are differences between groups for the means of factors promotion of the culture and cultural identity.

Keywords: Self-efficacy, factor structure, measurement invariance, multi group confirmatory factor analysis.

Introduction

The beliefs that people have about themselves are crucial for the control and personal competence when dealing with problems, challenges and decisions that have to be confronted during a lifetime. Among the beliefs of self-reference used by individuals to interact with their environment are self-efficacy beliefs (Pajares, 2001).

The application of the theory of self-efficacy of Bandura in education shows how students with high self-efficacy expectations have greater

academic motivation (Brown, Tramayne, Hoxha, Telander, & Lent, 2008; Caprara et al., 2008). Also, they perform better, they are more able to effectively self-regulate their learning and show greater intrinsic motivation when they learn (Cartagena, 2008; Salanova, Llorens, & Shaufeli, 2011). Consequently, improving self-efficacy expectations increases the motivation and performance in learning tasks (Adeyemo, 2007). Therefore, is not enough to be able to do something, people must be judged themselves capable or able to use the abilities and personal skills to a variety of circumstances, including emotional reactions to difficult situations (Blanco, Martínez, Zueck, & Gastélum, 2011).

Therefore, the greater perceived efficacy, the greater degree of effort that is invested and the greater persistence in achieving the proposed goal; situation of utmost importance for a person who is in a learning process to be successful (Ornelas et al, 2012; Schmidt, Messoulam, & Molina, 2008).

Definitely, self-efficacy beliefs represent a cognitive mechanism that mediates between knowledge and action and determines, along with other variables, the success of own actions (Sansinenea et al., 2008).

This instrumental study (Montero & León, 2005) aims to provide empirical support for the factorial division of Self-efficacy in the Sociocultural Sphere Scale; which it is justified by the importance of checking the factorial structure and the psychometric equivalence of the instrument in different groups; since in the context of intergroup comparison, it is essential to consider the need to carry out the adaptation of an instrument of psychological measure that fulfills all the criteria of equivalence, but above all consider whether the same factor structure is applicable to different groups of subjects or, more generically, to different populations (Abalo, Lévy, Rial, & Varela, 2006; Arbuckle, 2012).

This paper aims, firstly, to investigate whether the psychometric results proposed by Blanco et al (2011) for the Self-efficacy in the Sociocultural Sphere Scale (EAAAS) replicate, and secondly, expand them. To do this, first the degree of congruence of the factorial structure of EAAAS obtained in this study will be checked and the one reported by (Blanco et al., 2011). Secondly, the factorial invariance between samples of this study is calculated.

Methods:
Participants

The sample of 1545 participants, 616 (39.1%) woman and 929 (60.1%) men, was obtained by a convenience sample, trying to cover the representation of the different degrees offered at the Autonomous University of Chihuahua. Women ages was ranging between 17 and 20 years, with a mean of 18.11 and a standard deviation of 0.69 years; and men ages was

ranging between 17 and 20 years, with a mean of 18.27 and a standard deviation of 0.75 years.

Instrument

Self-efficacy in the Sociocultural Sphere Scale (EAAAS) is a Likert questionnaire assisted by computer of 9 items (Muñoz et al., 2012) where the respondent answers on a scale of 0 to 10, how capable he feels in every one of the items of the factors Promotion of the culture and Cultural Identity.

Procedure

Were invited to participate in the study the first year students of the degrees offered at the Autonomous University of Chihuahua; those who agreed to participate signed the corresponding consent letter. Then, the instrument explained above was applied using a personal computer using the administrator of the instrument module (Muñoz et al., 2012), in a session of about 20 minutes; in the computer labs of the participating academic units. At the beginning of each session students were given a brief introduction on the importance of the research and how to access the instrument; instructions on how to respond were in the first screens; before the first instrument item. At the end of the session students were thanked for their participation.

Once the instrument was applied, data was collected by the results generator module of scales editor, version 2.0 (Blanco et al., 2013).

Data Analysis

The psychometrical analysis was applied in two stages: 1) Factorial Confirmatory Analysis and 2) Invariance Factorial Analysis; so that it could obtain evidence that presents the best properties for the scores confirmation of self-efficacy in academic behaviors on men and women university students.

To conduct the confirmatory factorial analysis for each sample, AMOS 21 software was used (Arbuckle, 2012), variances in terms of error were specified as free parameters, in every latent variable (factor) a structural coefficient was set associated to one, so that the scale was equal to the superficial variables (items). The estimated method used was the maximum likelihood; following the recommendation of Thompson (2004), so when the confirmatory factorial analysis is used, it is necessary to verify not only the adjustment of the theoretical model but it is recommended to compare the fit indexes of some alternative models to select the best.

To evaluate the adjustment model statistical chi-squared, the Goodness-of-fit index (GFI), and the root mean square error of approximation (RMSEA) were used as absolute adjustment measures. Adjusted goodness of fit index (AGFI) the Tucker-Lewis Index (TLI), the

comparative fit index (CFI) were used as incremental fit indices. Parsimony normed fit index (PNFI), the Parsimony Goodness-of-fit index (PGFI), the chi-squared fit index divided by degrees of freedom (CMIN/GL) and the Akaike Information Criterion (AIC) were used as parsimony fit indices (Gelabert et al., 2011).

Finally, an analysis of the factorial invariance of the models of measurement obtained was made, following the recommendations of Abalo et al. (2006), and was calculated the reliability of each of the dimensions through Cronbach's alpha and Omega coefficient (Revelle & Zinbarg, 2009).

Results:
Confirmatory Factorial Analysis

According to the results obtained in Table1 in the Confirmatory Factorial Analysis of 9 items grouped in two factors in the sample of women is optimal (GFI .992 y RMSEA .009) and according to the incremental adjustment measures and Parsimony significantly superior to the independent model and very similar to the saturated model.

Furthermore, the confirmatory factor analysis on the sample of men (Table 1) shows again that the measuring model of two factors is optimal (GFI .986 y RMSEA .042) and according to the incremental adjustment measures and Parsimony significantly superior to the independent model and very similar to the saturated model.

Table 1. Absolute, incremental and Parsimony fit indexes for the generated models.
Confirmatory factor analysis for women and men.

Model	Absolute indexes			Incremental indexes			Parsimony indexes	
	χ^2	GFI	RMSEA	AGFI	TLI	CFI	CMIN/DF	AIC
Factor solution for women								
Independent	2440.597*	.372	.330	.214	.000	.000	67.794	2458.597
Saturated	0.000	1.000				1.000		90.000
2 factors	23.022	.992	.009	.984	.999	1.000	1.046	69.022
Factor solution for men								
Independent	3816.989*	.363	.336	.203	.000	.000	106.027	3834.989
Saturated	0.000	1.000				1.000		90.000
2 factors	57.354*	.986	.042	.972	.985	.991	2.607	103.354

Note: * $p < .05$; GFI = goodness of fit index; RMSEA = root mean square error of approximation; AGFI = adjusted goodness of fit index; TLI = Tucker-Lewis index; CFI = comparative fit index; CMIN/DF = chi-squared fit index divided by degrees of freedom; AIC = Akaike information criterion

According to the results of Table 2, in both samples, except item 4, all of the items properly saturate in their dimension (factor) provided. Observing moderate high intercorrelations among the factors showing a not very good discriminant validity.

Invariance of the factorial structure among men and women university students

The fit indexes obtained (Table 3) allow to accept the equivalence of the basic measuring models between the two subsamples. Although the value of Chi-squared exceeds to that required to accept the hypothesis of invariance, the rest of the indexes contradict this conclusion (GFI .988; CFI .994; RMSEA .023; AIC 172.370) this allows us to accept the base model of invariance (model without restrictions).

Table 2 Standardized solutions for the confirmatory factor analysis in both samples.

Factor weights

Item		Factor 1		Factor 2	
		Women	Men	Women	Men
7	Participate in proposals that contribute to the development of social and cultural improvement.	.82	.82		
9	Act as a promoter of life quality.	.82	.82		
8	Interact with different social groups promoting quality of life.	.79	.82		
6	Generate an interaction with the environment, encouraging the community cultural level.	.76	.76		
1	Actively participate in processes of creation, conservation and diffusion of the culture.	.73	.72		
5	Analyze the phenomena of globalization and sustainable development from different perspectives.	.65	.63		
3	Show values towards the different traditions and multicultural difference.			.83	.75
2	Act with respect and tolerance			.55	.65
4	Identify with the culture of my state and country.	.23	.27	.32	.30
Correlations between factors					
Factor 1		-	-		
Factor 2		.61	.65	-	-

Note: F1 = promotion of the culture; F2 = Cultural Identity

Adding to the base model restrictions on factorial weights the metric invariance was characterized. The values obtained from table 3 permit to accept this invariance level. The goodness of fit index (GFI .986) and the root mean square error of approximation (RMSEA .024) continue to provide convergent information in this direction. Also, the Akaike Information Criterion (AIC 175.349) and Bentler comparative fit index (CFI .992) do not suffer large variations over the previous model. Using the criteria for the evaluation of the nested models proposed by Cheung and Rensvold (2002), who suggest that if the calculation of the difference of the CFI of both nested models diminish in .01 or less, the restricted model is taken for granted therefore the compliance of the factorial invariance. The difference of the CFIs obtained (.002) allows to accept the metrical invariance model.

We can conclude up to this point that factorial charges are equivalent in the two samples.

Having demonstrated the metric invariance between the samples, we evaluate the equivalence between intercepts (strong factorial invariance). The Indices (Table 3) show a good adjustment of this model, evaluated independently as well as analyzed toward nesting with the metric invariance model. The difference between the two comparative indices of Bentler is zero; the general adjustment index is .985 and the root mean square error of approximation is .025. Accepted then the strong invariance, the two evaluated models are equivalent toward the factorial coefficients and the intercepts.

The promotion of the culture factor reaches values of internal consistency above .85 in both samples (men and women); demonstrating adequate internal consistency; while the Cultural Identity factor reaches values below .70 showing a low internal consistency (Table 4).

Contrasts of the means of the factors among women and men

Once proved the factorial invariance, the differences among the means of the factors from the two groups were estimated taking as a reference the men's sample, establishing 0 as the value of the means for this sample, considering freely the value of the means for the sample of women. Restrictions about regression coefficients and intercepts required for the contrast among the means made automatically through the software AMOS 21 (Arbuckle, 2012). The results of the comparisons between means indicated that the mean of the factors Promotion of the culture and Cultural Identity were significantly higher (0.520, p <0.001 y 0.340, p <0.001 respectively) in women.

Table 3 Goodness of fit indexes of each of the models tested in the factorial invariance.

Model	Fit Indexes						
	χ^2	gl	GFI	NFI	CFI	RMSEA	AIC
Model without restrictions	80.370*	44	.988	.987	.994	.023	172.370
Metric Invariance	99.379*	52	.986	.984	.992	.024	175.349
Strong factor invariance	106.500*	55	.985	.983	.992	.025	176.500

Note: * p < .05; GFI = goodness of fit index; NFI = normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation; AIC = Akaike information criterion

Table 4 Coefficient omega and alpha for the factors obtained

Factor	Women		Men	
	Ω	α	Ω	α
1. Promotion of the culture	.869	.880	.872	.884
2. Cultural Identity	.602	.616	.600	.640

Conclusion

From the results, analysis and discussion shown and taking in consideration that the main objective of this study was to examine the factorial structure and the measure of the invariance of this structure in university students, we can conclude the following:

1) The Confirmatory Factorial Analysis, in both samples, indicated that the adjustment of the data to the theoretical model of 9 items grouped in two factors is optimal. At the same time that the two factors obtained, in general, adequate standardized factorial saturations. Also, the factors correlate among themselves in a positive way and statistically significant, which shows that, as Self-Efficacy perceived increases in some of the factors, the other one increased as well.

2) The factor promotion of the culture showed adequate internal consistency, while the internal consistency of Cultural Identity factor was below the acceptable; this probably due to the small number of items of the factor.

3) Along with all the above, the results of the analysis of the factorial invariance between samples; indicate a high congruence between pairs of factors. Suggesting the existence of strong evidence of cross-validation of the measure and therefore the stability of the structure, until the contrary is proved.

4) The comparisons between the groups reflect significant differences in favor to women, in the means of the factor promotion of the culture and Cultural Identity. Suggesting that women perceive themselves a little more self-efficient than men in relation to those factors.

In summary, the analysis of the psychometric properties has shown that a two-factor structure is viable and appropriate in accordance with established psychometric requirements when informants are the students themselves. The structure of two factors, based on statistical and substantive criteria, has shown adequate indicators of adjustment, reliability and validity. However, we believe that further studies are necessary in order to corroborate or refute the data obtained in this investigation.

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The Fundamental Movement Skill of Male Students with Intellectual Disabilities in Korea

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Abstract

This study was conducted to examine the Fundamental Movement Skills (FMS) levels of male students with intellectual disabilities between the ages of 10 and 18 years old. A total of 126 students with intellectual disabilities (IQ < 50), who were attending special education schools in South Korea, participated in the study. FMS were assessed using the Test of Gross Motor Development 2nd edition (TGMD-2), which evaluates locomotor skills (running, hopping, leaping, sliding and jumping) and object control skills (overhand throwing, catching, kicking, hitting, striking and dribbling). Data were analyzed using descriptive statistics and ANOVA with 95% confidence intervals, and the level of significance set at $p < .05$. The results showed that the older students had significantly better scores on all locomotor and object control skills except kicking. Higher proportions of students demonstrated mastery of performance criteria for the subset of locomotor and object control skills that involved only leg or arm movement, than for the subset that required coordinated body and arm movement.

Keywords: Fundamental Movement Skills, Intellectual Disability, TGMD-2, Special Education School.

Introduction

The reason to assess and measure Fundamental Movement Skills (FMS) is to evaluate the development of gross motor skills, in terms of FMS mastery. Such evaluation provides information about which sports and activities students should practice or avoid, and which specific skills and coordinated movements they need to develop (Oakley and Booth 2004).

FMS proficiency in childhood has been shown to influence participation in physical activities, heighten physical activity(PA)in childhood has also been associated with positive health outcomes (Ekelund et al 2004; Strong et al. 2005).

FMS association with PA has caused teacher and coach of sports or specialist to actively recommend the inclusion of FMS training in physical activity program plan(Haywood and Gerchell 2005; Bailey 2006). Generally, children have FMS mastery by about age 12, but children with intellectual disabilities might exhibit low levels of FMS. For this reason, they have lower participation in regular sports activities and get less exercise, which can lead to a "negative spiral of engagement" in children with low levels of FMS(Capio and Rotor 2010; Gallahue and Ozmun 2002; Hardy et al. 2010; Williams et al.2008). It is was important for children to participate in physical activity for their enjoyment, wellbeing, physical fitness, health, and social development; children who exercise have a lower likelihood of becoming obese, and a reduced risk of cardiovascular disease(Capio et al. 2014; Piek et al. 2012). The acquisition of FMS is a consecutive process that is influenced by various internal and external factors including biological, psychological, social, motivational, and cognitive factors, and FMS can be acquired through a range of active play experiences and structured programs(Hardy et al. 2010; Oakley et al. 2001; Sun et al 2011.

Children with intellectual disabilities show delayed development compared to children of the same age without disabilities(Staples and Reid 2010). Movement developmental delay in children with intellectual disabilities is associated with poor movement control ability, lack of comprehension, and low concentration(Piek et al. 2012). FMS mastery may be negatively affected by low IQ, low cognitive ability, and low perceptual ability. Delay in movement development may cause children with intellectual disabilities to have fewer opportunities to participate in physical and sports activities, leading to lack of self-confidence and motivation (Westendorp et al. 2011; Vandorpe et al. 2012; Capio and Rotor 20101). Furthermore, isolation from physical activities hinders children's physical, psychological, and social development and can have a negative influence on their sports participation or physical activity in the future(Westendorp et al. 2011; Fisher et al 2005; Frey et al 2006; Ulrich 2000).

The Test of Gross Motor Development 2nd edition (TGMD-2), a common and frequently used method of assessing FMS (Ulrich 2000) has been validated for children aged 3–10 years old. A Korean version of the TGMD-2, created by Park(2008) has been demonstrated to be valid and reliable for elementary school students from the first to the sixth grade. Several studies have evaluated FMS in children from the ages of 3 to 12 years old, and reported that the acquisition of FMS is nearly completed by

the age of 12(Ulrich 2000; Park, 2008; Bakhtiari et al. 2011; Choi and Roh 2011; Lee et al. 2011).   Previous studies have reported that children with intellectual disabilities lag developmentally by 4–5 years on average(Kang and Kim 2009). However, little research has been conducted on the FMS levels and patterns of children with intellectual disabilities or who are older than 12 years old. Therefore, research is needed to accurately understand the FMS level-s of children with intellectual disabilities, who show low levels of skills in several areas of physical activities and extracurricular activities including locomotor skill and object manipulation. It is necessary to collect preliminary data to develop physical education programs special education schools that will improve the students' FMS. The purpose of this study is to evaluate the FMS levels of male students, with intellectual disabilities who are 10 to 18 years old, attending special education schools.

Methods:

Participants

Four special education schools in the Seoul metropolitan area in South Korea participated in the study. Participants were 126 male students with intellectual disabilities between the ages of 10 to 18. They attended education classes two to three days (1 hour/day) per week. All participants lived in the Seoul metropolitan area, and all of their parents were Korean. We collected basic information on the children such as gender, birth date, physical activity participation, and IQ from a questionnaire we administered to their parents or guardians (Table 1).

Table 1. Demographic Characteristics of the Participants (N = 126)

Group	Age	n	Weight (kg)	Height (cm)	IQ
I	10	6	30.98 ± 10.9	135.31 ± 14.5	39.8 ± 11.03
	11	12	39.91 ± 21.6	144.55 ± 17.7	37.8 ± 11.9
	12	11	52.95 ± 19.2	153.6 ± 11.4	46.2 ± 11.2
	Total	29	43.01 ± 20.2	146.07 ± 16.0	45.8 ± 15.2
II	13	12	61.8 ± 21.9	160.16 ± 13.0	34.7 ± 9.1
	14	16	56.73 ± 15.6	157.1 ± 7.4	41.9 ± 11.6
	15	15	59.32 ± 16.0	165.81 ± 9.2	37.9 ± 8.3
	Total	43	59.02 ± 17.0	161.37 ± 10.2	38.46 ± 10.4
III	16	12	63.92 ± 15.5	168.13 ± 7.8	39.6 ± 12.9
	17	21	60.39 ± 22.2	163.42 ± 9.4	32.17 ± 5.06
	18	21	64.61 ± 17.2	167.21 ± 11.1	39.9 ± 10.6
	Total	54	62.82 ± 18.8	165.94 ± 9.89	37.2 ± 10.26

Testing procedure and Instrument

The TGMD-2 (Test of Gross Motor Development) was used to measure FMS. This instrument was developed by Ulrich(2000) and reconstructed by Park, Choe, and Kim(2009). The TGMD-2 tests locomotor

and object control skills. The test assigns 30 points to five locomotor movement skills: running (6 points), hopping (6 points), leaping (6 points), sliding (6 points), and jumping (6 points) and 38 points to five object control skills: overhand throwing (5 points), catching (4 points), kicking (4 points), striking (6 points), and dribbling (5 points). The content validity and reliability of this FMS assessment has been previously demonstrated with a high alignment of assessments at 85% (Park, 2008).

The study participants performed the five locomotor movements and the five object control movements two to three times. They were recorded by a video camera placed 6–7 m away. Three researchers scored each participant on each TGMD-2 item and average scores were calculated. The statistical analysis was performed with SPSS for Windows version.21 (IBM SPSS Inc., Chicago, IL, USA). Data were analyzed by three separate age groups: 10–12 years old (elementary school), 13–15 years old (middle school), and 16–18 years old (high school). Descriptive statistics, including proportions and means based on the raw scores, were used to describe the participants' skill mastery. Analysis of variance was used to calculate the average values, the standard error, 95% confidence intervals (CIs), and standard deviation for each item. Linear regression was used as a post-hoc test. Descriptive statistics including proportion and the mean based on the raw score were used to describe the mastery of FMS for separate age groups. Statistical significance was set at $p < 0.05$.

Results:

They have participated in physical education classes 2-3 days (1 hour/day) a week. We analyzed the data based on the age group (10-12 years old: elementary school, 13-15years old: middle school, 16-18years old: high school). Table 2 presents the participants mean scores and standard deviations, and the prevalence (as percentages 95% CI) of mastery of the 10 skills by age group (10-12 years; 13-15 years; 16-18years).

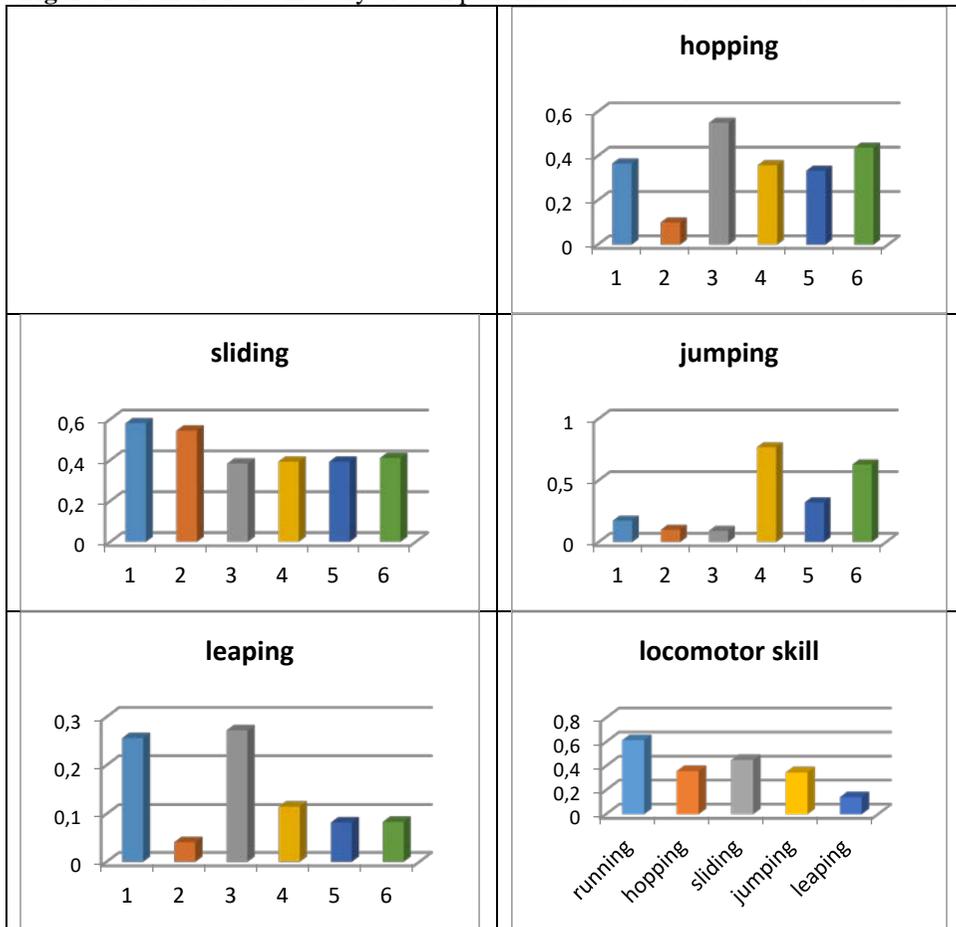**Table 2**. Fundamental Movement Skills among Students with Intellectual Disabilities

Fundamental Movement Skills	Score, Mean ± SD (95%CI)			*p*-value
	10-12aged (n=29)	13-15aged (n=43)	6-18aged (n=54)	
Locomotor skills	6.85±5.7 (3.9-9.7)	10.72±6.2 (8.5-12.9)	13.32±7.3 (11.3-15.3)	.000[***]
Running	2.39±1.4 (1.8-2.9)	2.66±1.4 (2.2-3.0)	3.33±.95 (2.9-3.7)	.005[**]
Hopping	.95±1.4 (.08-1.8)	2.53±2.1 (1.8-3.2)	2.88±2.3 (2.2-3.5)	.001[***]
Sliding	1.30±2.0 (.4-2.2)	2.33±2.2 (1.6-3.0)	2.97±2.2 (2.3-3.6)	.006[**]
Jumping	1.39±1.2 (.73-2.0)	2.23±1.6 (1.7-2.7)	2.4±1.7 (2.0-2.9)	.020[*]
Leaping	.60±1.5 (-.04-1.2)	.48±1.1 (-.01-.98)	1.33±2.0 (.86-1.7)	.043[*]
Object control skills	6.85±5.05 (4.5-9.1)	10.51±5.3 (8.7-12.2)	12.43±5.1 (10.8-14)	.001[***]
Striking a stationary ball	2.42±1.6 (1.7-3.1)	3.01±1.5 (2.4-3.5)	3.52±1.4 (3.0-3.9)	.010[**]
Stationary dribbling	.72±1.18 (-.11-1.5)	1.73±1.9 (1.1-2.3)	2.19±2.0 (1.6-2.7)	.003[**]
Catching	1.40±1.2 (.8-2.0)	2.41±1.4 (1.9-2.8)	2.69±1.3 (2.2-3.1)	.001[***]
Kicking	1.45±1.2 (.88-2.0)	1.86±1.2 (1.4-2.2)	2.32±1.3 (1.9-2.7)	.147
Overhand throwing	.85±1.03 (.35-1.3)	1.48±1.2 (1.11-1.8)	1.68±1.04 (1.3-2.0)	.009[**]

Significance levels: *p<0.001[***], p<0.01[**], p<0.05[*]*

The older students' mean FMS scores were significantly higher than those of the younger students for all skills except for kicking. The overall scores for mastery of locomotor skills were 47.57% for 10-12 years old, 38.28% for 13-15 years old, and 24.46% for 16-18 years old. The prevalence of mastery differed across FMS. All age groups had the heist scores for mastery of running (66.6% for 10-12 years old, 53.2% for 13-15 years old, and 47.8% for 16-18 years old), Scores were lower for sliding (59.4%, 46.6%, 26.6% respectively), hopping (59.4%, 42.2%, 15.8% respectively), jumping (40%, 37.2%, 2.3% respectively), and leaping (22.2%, 8.0%, 10.0% respectively). Overall scores for mastery of object control skill was 51.79% for 10-12 years old, 43.79% for 13-15 years old, and 28.5% for 16-18 years old. Scores for mastery of catching were 67.3%, 60.3%, and 35% respectively; striking 58.7%, 50.2%, and 40.3% respectively; dribbling 54.8%, 43.3%, and 18% respectively; kicking 46.4%, 37.2%, and 29% respectively; throwing 33.6%, 29.6%, and 17% respectively. These results show that the proportion of students with mastery of object control skills was higher than the proportion of students with mastery of locomotor skills.
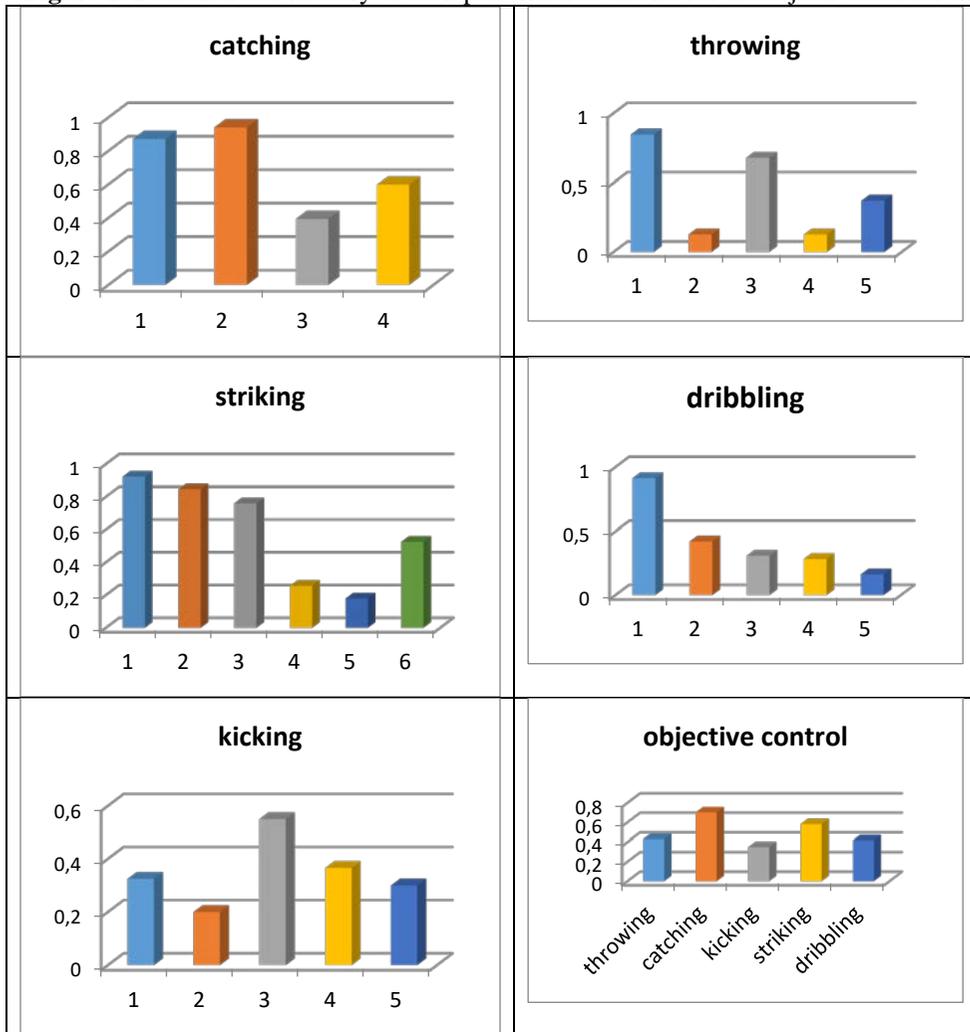
Figures 1 and 2 showed that leaping and hopping performance mastery scores were lower than running, jumping, sliding in locomotor skill. There were showed that the most lower score performance is arms swing to forward and backward movement in running criteria, and upper body slant forward movement in leaping, arms swing can make thrust movement in hoping, arms extension forcefully forward and upward reaching full extension and, arms are thrust downward during landing movement in jumping, step sideways with lead foot followed by a slide of the trailing foot to point next to the lead foot in sliding. Also, In Objective control skill, kicking criteria was the most lower score than others criteria. There were showed movements of the most lower score is caught by hands only movement in catching, in throwing was backward and upward of throwing hand, transfers body weight to front foot in striking, bounce level is regularly when control of ball movement in dribbling, an elongated stride or leap immediately prior to ball contact in kicking. Although high performance was shown in locomotor skills, namely jumping and landing movements with two feet together, as well as horizontal movements such as sliding, low performance was shown in movements that require propulsion using arms and feet, as well as movements that require arm and foot coordination.

Figure 1. Demonstrated mastery of each performance criteria for the locomotor skills

running	1. arms move in opposing direction to legs, elbows bent 2. arms swing forward and backward 3. upper body slants forward 4. narrow foot placement landing on heel or toe 5. Non-supported leg bent approximately 90 degree
hoping	1. arms move in opposing direction to leg and elbow 2. arms swing can make thrust 3. upper body slant forward 4. non-support leg swings rhythmically forward and backward 5. arms flexed and swing forward to produce force 6. take off & lands 3 consecutive times on preferred.
jumping	1. preparatory movement includes arms back swing 2. arms extension forcefully forward and upward reaching full extension 3. arms are thrust downward during landing 4. take off both feet simultaneously 5. forcefully forward and knee movement bent more than 90degree 6. land on both feet simultaneously
leaping	1. arm move in opposing to leg 2. upper body slant forward 3. a period where both feet are off the ground longer than running 4. forward reach with the arm opposite the lead foot 5. maintains a rhythmic pattern for four consecutive leaping
sliding	1. arms bent and lifted above more than waist 2. body turned sideways to shoulders are aligned with the line on the floor 3. a step sideways with lead foot followed by a slide of the trailing foot to point next to the lead foot 4. showed fly phase 5. a minimum of four continuous step-slide cycles

Figure 2. Demonstrated mastery of each performance criteria for the objective control skills

dribbling	1. contact ball with one hand at about belt level 2. knee bent when dribbing 3. ball contacts surface in front or to the outside of foot on the preferred side 4. maintains control of ball for five consecutive bounces 5. bounce level is regularly when control of ball
striking	1. dominant hand grips bat above non-dominant hand 2. non-preferred side of body faces the imaginary tosser with feet parallel 3. bat swing showed diagonal (above- dawn-horizontal) 4. hip and shoulder rotation during swing 5. transfers body weight to front foot 6. bat contacts ball
catching	1. preparation phase where hands are in front of the body and elbows are flexed 2. arms extend while reaching for the ball as it arrives 3. ball is caught by hands only 4. can catch well
kicking	1. rapid continuous approach to the ball 2. an elongated stride or leap immediately prior to ball contact 3. non-kicking foot placed even with or slightly in back of the ball 4. kick ball with in step of preferred foot(shoelaces) or toe 5. hip and kicking foot rotation
throwing	1. windup is initiated with downward movement of hand/arm 2. backward and upward of throwing hand 3. rotates hip and shoulder to a point where the nonthrowing side faces the wall 3. weight is transferred by stepping with the foot opposite the throwing hand 4. follow- through beyond ball release diagonally across the body toward the nonpreferred side

In particular, a lower performance was shown in leaping movements, relative to other movements. Although high performance was shown in object control skills, namely throwing movements with the hands, low performance was shown in movements that use the lower body or require arm and foot coordination. In terms of kicking, low performance was   shown in running-start movement or step movement, but high performance was shown in the simple movement of touching a ball with the toe. In terms of striking, high performance was shown in simple movement of grabbing a bat, but low performance was shown in the coordination of movements that use the arms and waist.

Discussion

This study demonstrates that age influences the FMS performance capability of male students with intellectual disabilities (IQ < 50); the older students showed higher mastery of skills involving simple movements that use the arms and legs, compared to movements that require coordination of the arms, legs, and torso. In other words, they showed lower levels of the locomotor skills, of hopping and leaping, compared to running, jumping, and sliding. Moreover, in terms of the object control skills, they showed the highest level of mastery for striking movements but lower mastery of movements that require coordination of the arms, legs, and lower body, such as dribbling and throwing. These results may indicate that as intellectually disabled children pass through puberty and become teenagers through puberty, physical changes in length of arms and legs, body composition, and muscle strength, influence their FMS.

Furthermore, the results may indicate that FMS is positively influenced by performing repeated exercises through continuous participation in physical education or physical activities beginning in the lower grades as by the higher grade students better FMS performance, compared to the lower grade students. Many previous studies have reported that FMS are related to cognitive ability and physical activities(Westendorp 2011; Kim and Lee 2013; Bastik et al. 2011).

The results of this study, in which only students with IQ's of 50 were analyzed, show that FMS scores increases with age despite intellectual disabilities, and this pattern positively correlates to physical growth and development, as well as to repeated participation in physical activities. Repeated participation in physical activities is thought to be a particularly important factor in the development and acquisition of FMS in students with intellectual disabilities. In this study, the level of FMS acquisition in elementary students with intellectual disabilities (10–12 years old) was quite low, with scores of 24.46% for locomotor and 28.5% for object control skills; middle-school students (13–15 years old) showed 41.03% mastery of object control skills, and high-school students showed 49.68% mastery of object control skills. These levels are all below the levels of normal preschool students. The FMS movement acquisition level of middle-school students with intellectual disabilities who have an IQ below 50 is comparable to the 42% mastery of 4-year-old normal preschool students reported by Hardly et al (2010). Even after entering middle or high school, students with intellectual disabilities who have an IQ below 50, have a much lower FMS acquisition level than normal students, and experience difficulties in organized sports activities or physical activity programs. Therefore, the development of exercise programs to improve FMS in students with

intellectual disabilities who have an IQ below 50, is necessary. This study's results suggest that in developing an exercise program 0that takes into account the developmental delay of movements in students with intellectual disabilities, the addition of movement exercises that require the coordination of many body parts, as well as exercises that promote chest and limb movements must be considered.

Conclusion

This study demonstrated that while students with intellectual disabilities who have an IQ below 50 displays lower FMS performance levels relative to normal students, their FMS improves with age. Therefore, when planning a physical activity program for students with intellectual disabilities and low FMS, it is necessary to include active and repetitive exercises, to improve their skill performance capability. Such exercise programs should start from the lower grades, because continued participation in such activities over time is thought to further improve FMS performance capability with age. In addition, it is important to note that lower performance capability was observed in complex movements requiring coordination of the arms, legs and torso, compared to simple movements using only arms or legs. Therefore, in considering education to improve the fundamental movement performance capability of students with intellectual disabilities, the addition of complex performance movements and exercises that require the coordination of multiple body parts should be considered. Appropriate exercise programs may help improve the levels of FMS necessary in the daily lives of students with intellectual disabilities, in addition to the contributing to the maintenance of their health, and quality of life.

There were several limitations in this study. First, the study relied solely on IQ to distinguish the degree of intellectual disability of the participants, but did not consider the psychosocial factors, or the interest levels of the participants in certain exercises. The study's IQ range of 30 to 50 limited the diversity of degree of intellectual disability of the participants. Despite these limitations, the study's design had several. First, the study used as a measuring device a version of the TGMD-2 that had been restructured to evaluate nationally representative data. In addition, this study was the first with a large-scale participation of Korean students with intellectual disabilities. Another advantage of this study may be that the measurements included detailed items for evaluating the FMS performance capability of students with intellectual disabilities. Additional studies that consider other factors that may influence the FMS of students with intellectual disabilities are necessary to more accurately understand their FMS development.

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Drug Use and Sources of Drug Information Among Secondary School Students in Imo State, Nigeria

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Abstract

This study was an investigation into drug use and sources of drug information among secondary school students in Imo State, Nigeria. A sample of 1400 students, aged 16-17 years was studied. Percentages were used to describe the students' drug use and sources of drug information. Chi-square was used to verify the four hypotheses postulated for the study. Results showed that the main drugs the students who took part in the study used included analgesics, stimulants, anti-malaria, alcohol, worm expellants, nasal decongestants, sleeping pills, laxatives, and anti-biotics and their main sources of drug information included print media, television, radio, and friends and peers. Chi-square tests indicated that the differences in the use of drugs between boys and girls were significant in most cases. It is recommended that drug education be made an integral part of secondary school curriculum.

Keywords: Drug use, Sources of information, Secondary school students, Imo State.

Introduction

Although the history of drug use is centuries old, during mid 1960's a widespread introduction of marijuana, and subsequently other illicit drugs, occurred among the young. Since the first experience with drugs occurs most frequently at the age of mid adolescence, that is, between 15 and 19 years (Hotujac, Sagud, Hotujac, 2002; Warner, Kessler, Huges, Anthony, & Nelson, 1995), the highest prevalence of drug use is between the age of 18 and 25 years, and later tends to decrease, being rare after age of 35 years (Russel, Newman, & Bland, 1996). Therefore, adolescents, being in intensive physiological and psychological growth transformation, seem to be the most vulnerable population regarding drug use (Parrish, 1994). Drug use

is a consequence of interaction between complex circumstances as individual predisposition, personality traits, family and peer influence and the role of an individual in a society (Davies, 1994). Surveys (Wright, 1995; Ogel, Tamar, Evren, & Cakmak, 2000; Ogel, Tamar, Evren, Cakmak, 2001; Read, Wood, Davidoff, McLacken, & Campbell, 2002; Igwe & Ojnnaka, 2010) suggest that in both in-and out-of-school adolescents, the socially acceptable drugs like alcohol and cigarettes are commonly used. The patients interviewed in a study (Johnston, O'Malley, Bachman, & Schulenberg, 2008) illustrate the important 'gateway' theory of drug progression. Psychological dynamics influencing drug use identified included peer pressure, lack of self-confidence, reduction of stress and frustration, curiosity and search for excitement, experimentation and conduct problems while social factors include poverty, family problems, and social acceptability of local alcoholic drinks like palm-wine (Freud, 1953; Johnston, O'Malley, Bachman, & Schulenberg, 2008, Ndu, Ndu, Olarewaju & Somoye, 2009).

Secondary school students are an at-risk population for substance-related problems (Simons, Gaher, Correia, Hansen, & Christopher, 2005). The consumption of alcohol, legal and illegal drugs in the secondary school population tends to be growing (Simons, Gaher, Correia, Hansen, & Christopher, 2005; Read, Wood, Davidoff, McLacken, & Campbell, 2002) and has become a source of worry in many countries. The passage from junior secondary school to senior secondary school is usually marked by an increment in frequency of opportunities for peer interaction and in importance of the role of peer norms (Read, Wood, Davidoff, McLacken, & Campbell, 2002). Direct (or active) peer influences explicitly focus on getting a person to drink. Also, peers, through their own actions, may provide information about which behaviours are accepted and admired, which is considered appropriate in a given social context, and therefore what behaviours are likely to lead to social acceptance and reinforcement. Each of these indirect influences set the stage for anticipated social reinforcement (Borsari & Carey, 2001). Lewis and Neighbors (2004) demonstrated that men and women overestimated the drinking pattern of their male and female peers.

An estimation tracking the prevalence of drug use among adolescents seems to be very important. While some data indicate decrease in alcohol abuse among adolescents in recent years, it is not the case with other drugs, especially with cannabis and over-the-counter drugs, including those labeled prescription drugs (National Institutes of Health, 2005; Wright, 1995). However, it could be basically difficult to estimate the number of secondary school students using drugs and perhaps a survey like the present one might be a better way of establishing the proportion of secondary school students in Imo State who use drugs. According to Katalini, Kuzman, and Raja (1998),

data estimating illicit substance use are derived from hospital records of medically treated drug users and from police records. The real number of drug users in Imo state, Nigeria is unknown. Other systems currently available to gauge drug use levels and trends, such as national household survey of drug use estimating the drug use in the total population (Warner, Kessler, Huges, Anthony, & Nelson, 1995) have not been performed in Imo State till date. The only tracing study of prevalence and perceived health effects of alcohol is that Ebrim and Morankinyo (2011) conducted in Owerri, the capital city of Imo State used male undergraduate students. Since this study was delimited to alcohol among male undergraduates, it may not have been comprehensive enough to make a valid judgment on drug use among adolescents in Imo State.

Previous studies conducted in different regions of the globe reported that the prevalence of drug use was significantly reducing (Martinez, del Rio, Lopez, & Alvarez, 1999; Gfroerer, Greenblatt, Wright, 1997; Webb, Ashton, Kelly & Kamali, 1996; Thomas, Goddard, Hickman, & Hunter, 1993; Macfadden & Woody, 2000). Views about alcohol and other drugs and rates of use may vary among gender and age groups (Ogel, Tamar, Evren, & Cakmak, 2001). Lifetime prevalence of illicit drug use was found 3.3% among high school students (15-17 year age group) in a study done in 15 different cities of Europe in 1998 (Ogel, Tamar, Evren, & Cakmak, 2000). The above scenario is observed in Europe and other developed countries and documents of drug use and sources of drug information among secondary school students in Imo state are rarely available. It is because of this scenario that this study was conducted to; at least, provide baseline information on the drug use and sources of drug information among secondary school students in Imo State.

The purpose of this study, therefore, was to investigate drug use and sources of drug information among secondary school students in Imo State. Two hypotheses were postulated for verification at $p < .05$, thus:

1.   There is no significant difference between secondary school boys and girls in Imo State in their use of individual drugs of the study, and

2.   There is no significant difference between secondary school boys and girls in Imo State in their sources of individual drug information of the study.

The study might form a baseline data on drug use and sources of drug information among secondary school students in Imo state. However, the findings of the study might be of immense benefit to health education curriculum planners so as to drive drug education into any future health education curriculum for secondary schools.

Methodology

Between September and December 2008, a cross sectional survey was carried out among 1400 (boys 700, girls 700) students randomly drawn from 20 (10 rural, 10 urban) co-educational secondary schools in Imo state. The secondary schools were selected from two (Owerri and Okigwe) out of three education zones in Imo state. In each school 70 boys (SS2 35, SS3 35) and 70 girls (SS2 35, SS3 35) were randomly selected using systematic random sampling technique. Compiling two lists one for boys and the other for girls, with respect to grade, facilitated this.

The researchers used a self-developed questionnaire entitled: students' drug use and sources of drug information questionnaire (SDUSDIQ), which consisted of 25 items arranged in two sections; A and B. Section A, contained three questions about the gender, age and class of the students. Section B, consisted of 22 items on students' drug use and sources of drug information of which 14 items were meant to elicit information of the drugs the students use and 8 items enquired about the students' sources of drug information.

Five experts in health education from two institutions of higher learning in Enugu State were used for validating the SDUSDIQ. Thirty secondary school students (15 each from a rural and an urban school) of both genders (graders 11 and 12) in Ebonyi state were used for test of reliability. The data yielded a reliability coefficient of 0.83. This was considered adequate for the study.

Permission was granted from the principal of each secondary school included in the study prior to data collection. A consent note with the explanation for the research purpose, method of response and assurance of anonymity was attached to each copy of the SDUSDIQ. The teachers in charge of the classes used in the study assisted the researchers in administering the SDUSDIQ on the students. The students were allowed 30 minutes during break period in a school day to complete the SDUSDIQ.

In analyzing the data collected, the completed copies of the SDUSDIQ were examined for completeness of responses and copies that had incomplete responses were discarded. Out of 1400 copies of the SDUSDIQ administered; 1151 (boys 495, girls 656) representing about 82.2% return rate, were used for analysis. Percentages were used to describe the students' drug use and sources of drug information. Statistical differences between variables were tested using measures of association, including the χ^2 chi-square statistic. An alpha level of 0.05 was set for the chi-square (χ^2) tests. All data analyses were done with Statistical Package for Social Sciences (SPSS) Version 20.0 for Windows.

Results

Table 1: Drugs used by students

Drugs	Responses			
	Overall	Boys (n =495)	Girls (n = 656)	
	%	%	%	χ^2 Value
Analgesics	92.4	87.1	96.3	33.17*
Anti-malaria	87.3	78.4	94.1	61.11*
Worm expellants	56.6	51.5	60.4	8.66*
Inhalants (e.g., nasal decongestants)	55.9	63.2	50.3	18.64*
Cough mixtures	45.4	45.7	45.1	0.01
Thalazole	48.5	42.6	52.9	11.52*
Purgatives and laxatives	53.3	60.4	48.0	16.85*
Sleeping pills (e.g., valium)	55.1	46.1	61.9	27.99*
Narcotic (e.g., pain relievers)	26.3	21.8	29.7	8.68*
Anti-biotics (e.g., ampiclox)	52.3	27.7	70.9	209.41*
Stimulants (e.g., kola nuts)	87.9	96.8	81.3	62.58*
Alcohol (e.g., beer, palm wine)	76.0	90.3	65.2	95.83*
Tobacco (cigarette)	22.1	32.5	14.2	54.24*
Marijuana (we-we)	5.2	9.7	1.8	109.02*

* Significant at *p* < .05

Percentages of use of drugs and results of χ^2-tests are listed in Table 1. It could be observed that more than three quarters of the students used analgesics, stimulants, anti-malaria, and alcohol. However, more than half the proportion of students used worm expellants, nasal decongestants, sleeping pills, laxatives, and anti-biotics. When boys were compared with girls, girls used analgesics, anti-malaria, worm expellants, sleeping pills, and anti-biotics more than boys; but boys used nasal decongestants, laxatives, stimulants and alcohol more than girls. Chi-square tests indicated all differences in the use of drugs between boys and girls were significant except in the use of cough mixtures.

Table 2: Sources of drug information

Sources	Responses			
	Overall	Boys (n =495)	Girls (n = 656)	
	%	%	%	χ^2 Value
School (Teacher)	40.6	47.9	35.1	18.74*
Church	35.1	40.2	31.3	9.56*
Family members	27.3	20.6	32.3	18.86*
Medical personnel	34.9	11.6	82.5	205.11*
Friends and peers	50.7	64.9	40.1	68.11*
Radio	51.3	62.6	42.8	43.39*
Print media (e.g., books)	62.7	87.5	44.1	255.66*
Television	59.2	69.1	51.7	34.66*

Percentages of sources of drug information and results of χ^2-tests are listed in Table 2. The students' main sources of drug information included print media (e.g., books), television, radio, and friends and peers. When boys were statistically compared to girls; the boys were superior to girls in most sources of drug information especially print media, television, radio, and friends and peers; but girls were superior in one important source of drug information namely; the medical personnel. Chi-square tests indicated differences in all sources of drug information between boys and girls were significant.

Discussion

The present study determined drug use and sources of drug information among secondary school students in Imo state. It was observed that more than 75% of the students used analgesics, stimulants, anti-malaria, and alcohol. However, more than 50% the proportion of students used worm expellants, inhalants, sleeping pills, laxatives, and anti-biotics. When boys and girls were compared statistically it was observed that all differences were significant (p < .05) except in the use of cough mixtures (Table 1). It is a common experience that analgesics and the other drugs used by the students could be obtained in the open market provided the user has the need for such drugs. Therefore, it was not surprising that the students commonly used the drugs since most of these drugs are always available for any person who desires to grab them. It was not also misleading to observe that girls were significantly more than boys to have used these drugs, except alcohol and stimulants where boys outwitted girls. The most astonishing finding among the students was the use of inhalants, the proportion of students who used the drug notwithstanding. The use of inhalants at the secondary school level of education could suggest that the students might in the future "graduate" to using potentially more dangerous substances as they age.

Findings from previous studies (Boyd, Esteban, & Teter, 2006; Crouch, Caravati, & Booth 2004; Gilchrist, Schinke, Trimble, & Cvetkovich, 1987; Wu, Schlenger, Ringwalt, 2005) did not lend credence to the findings of the present study where they found in their individual studies that there were no significant gender differences in the use of drugs. However, one possible explanation that could be made regarding this variation in the findings of the present study with those of the previous studies is the difference in the settings where the studies were conducted. The previous studies were conducted in developed countries, where perhaps, drug education may have been an integral part of the school curriculum unlike the setting of the present study where drug education is still a mirage. Therefore, the variation in the findings of the previous studies with those of the present study is plausibly acknowledged.

From the results, it is evident that the vast majority of the students received their information on drugs from the mass media and friends and peers (Table 2). Very little communication regarding drugs occurred between the students and their parents, teachers or health workers (e.g., doctors and nurses). This scenario, most often, is as a result of lack of interest on the part of teachers, culture on the part of parents and non-involvement in the organization of school health services on the part health workers. This suggests the importance of involving parents, teachers, health workers and even students in drug education programmes. The stimulation of interest in parents, teachers and health workers concerning drugs may help them educate themselves and their children/or students regarding the subject matter. This suggestion has worked in other health-related matters (Maswanya, Moji, Aoyagi, Yahata, Kusano, Nagata, Izumi, & Takemoto, 2000). The findings were consistent with previous findings that most people learned about drug from mass media and friends and not from official agencies so that is where one should start if one wants to change a drug culture (National Institutes of Health, 2005, Weiss & More, 1995). However, the implication of the findings of the present study underscores the need for a formal drug education in the secondary school health education or health science curriculum where teachers might have the opportunity of providing scientific information on drug and drug-related matters to the students.

Conclusion and Recommendation

One important way of reducing the use of drugs among both in-and out-of-school adolescents is through provision of worthwhile information on the subject matter. When people are provided with accurate information on any health-related matter, they become well able to make informed decisions about a given health matter (Action Health Incorporated, 2003). The findings of this study demonstrated that students in secondary schools in Imo State used a wide range of drugs and received their drug information mainly from print media (e.g., books), television, radio, and friends and peers and rarely did they receive drug information from teachers and medical personnel. There were statistical significant differences in the use of drugs between boys and girls with the exception of cough mixtures. Girls were more likely than boys to receive drug information from medical personnel. The results of the study suggest there may be need for monitoring of and prevention efforts aimed at reducing drug use among students.

There is considerable rationale to include drug education as an integral part of secondary school curriculum in order to get every teacher compulsorily involved in the provision of drug information. The results of the study may not be extrapolated to other population groups in Nigeria who may differ substantially in age, sex distribution and economic status. The

students surveyed represent an important group of the Nigerian population and information generated will be useful in the planning of future drug programmes in secondary schools in Imo State and other states in Nigeria.

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