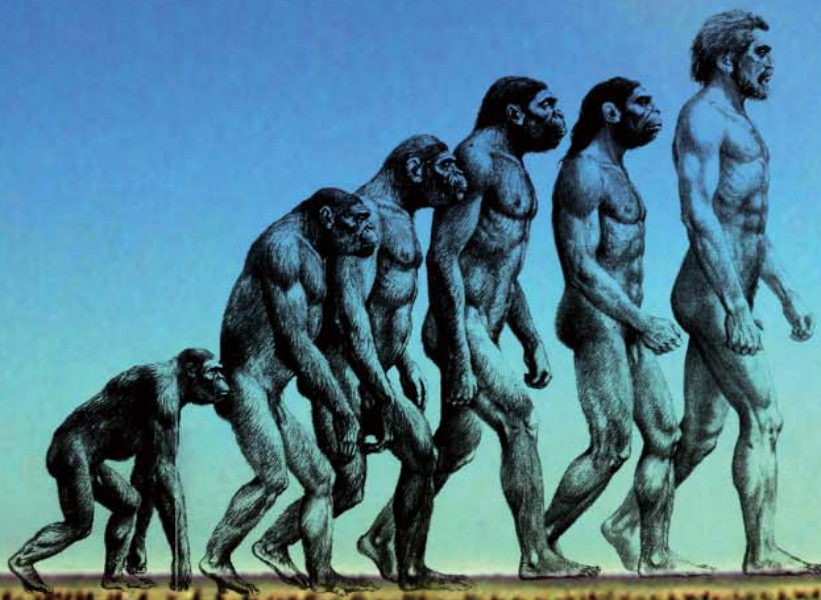
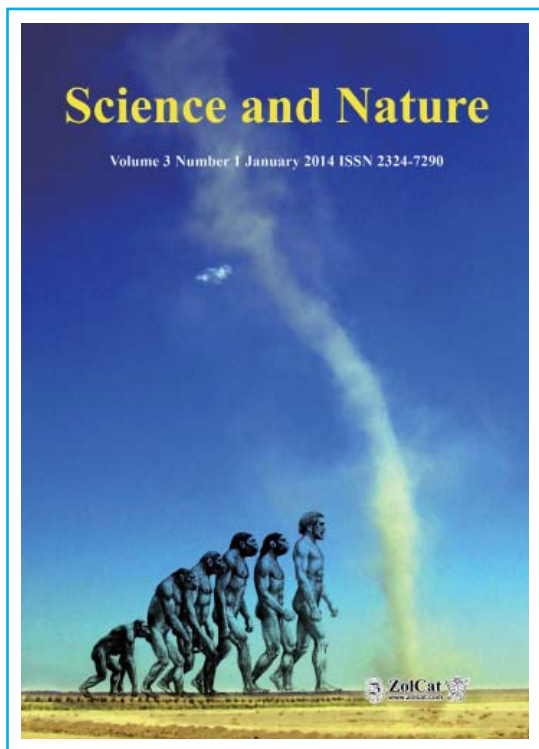


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Reflections on the Arbitrariness of the Language from the Pragmatic and Cognitive Point of View

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ABSTRACT

The arbitrariness of language is proposed by Saussure. It arouses debate over the issues whether it is arbitrary to all the languages and in the levels of words or sentences. On the basis of the different viewpoints, in the frame of the pragmatic theory of adaptation and the characteristics of cognition, this essay is to point out that language is arbitrary in essence, but when it comes to the different languages in different areas or communities, it is not arbitrary. People incline to adapt their language to the environment and communication, which makes language arbitrary relatively. Besides, the human cognitive characteristics make the human study and use language in cognitive system. Cognition is different when people are exposed to different environment. Accordingly, languages to the same sign are different in terms of signifiers and usages. The relativity of language can be represented in three aspects: words level, syntactic level, and discourse level. They are not arbitrary absolutely but relatively, which is determined by many factors, such as cognitive characteristics, community cultures, and environment etc. The arbitrariness and non-arbitrariness complement each other. This also reflects that language is dynamic.

Key Words

arbitrariness, pragmatics, cognition.

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Language is playing an increasingly important role in our modern life. Different researches on the language from different point of view are mushrooming. The design features of the language may be the basic researches to the language, of which the arbitrariness of language attracts the hot debate. Language is quite complex. We cannot give a definite answer to it, but we can observe its rules and its characteristics and try to account for it. In this paper, the arbitrariness is reflected on from the pragmatic and cognitive point of view. Pragmatics researches the exact use of language in communication, and cognition accounts for the language use scientifically. The two branches complement each other in the explanation for the language arbitrariness.

1. Different Ideas towards the Arbitrariness

Saussure(1959:100) held that the link unifying signifier and signified is arbitrary or, even more, since we understand by the sign the total result of the association of a signifier with a signified, we can say more simply: the linguistic sign is arbitrary. It can be understood that Saussure's claim is somehow reasonable, for example, in English, flower is called "flower", but in Chinese people say "hua". The signified is the same, which is the flower, but the signifiers are different, pronunciations are different, as well as the spelling of words. It can be seen that language is semiotic sign. The signifier seems to have no relationship with signified. From this perspective, it is arbitrary. However, other linguists oppose it for different reasons. For example, French linguist Pierre Guiraud, proposed that different words could share the same meaning, how to explain? Like the words "smile" "laugh" "giggle". Another linguist Halliday puts forth that syntax is less arbitrary than

words. He agrees on the arbitrariness on the basic level, but not absolutely.

2. The Adaptation Theory and Cognition Theory

2.1 The Adaptation theory

Jef Verschueren(2000:61) hold that adaptability is the property of language which enables human beings to make negotiable linguistic choices from a variable range of possibilities in such a way as to approach points of satisfaction for communicative needs. Adaptability makes people incline to choose the suitable expressions in accordance with the facing circumstance. This opinion is different from the universality, which believes that people is equipped with an innate linguistic competence genetically and autonomously. Verschueren thinks that it is genetical but not autonomous. And at the same time, the expressions are shaped by the circumstance. So it is a dynamic process, not a quiet one. It is this characteristic that makes the language become more adapted and simplified to the environment. From Verschueren's view, it can be seen that language is developed and functioned in the communication, and it is the reflection of people's adaptation to the environment. and also the environment's influence on the language.

2.2 Cognition theory

Cognition is mental process that includes attention, memory, understanding language, problem solving and so on. F.Ungerer and H.J.Schmid(2005) introduce the cognitive theories, like conceptual metaphor, prototypicality, cognitive model, mental space, iconicity and so on. It involves different disciplines, such as psychology, philosophy, linguistics and cognition. When people study and use the language, the cognition is involved consciously or unconsciously. The cognitive linguistic research from

three ways: experiential view, prominent view and attention view. The experiential view describes objects not only from its referential function, but also provides vivid and natural description of its usages in social practice. For example, when people describe the a tourist spot, they may describe the beautiful scene and delicious food or disappointing scene and unfriendly local people, etc. The comment is given unconsciously, for this is natural for the human experience, making them compare and value the experience. People's cognition towards language has its own characteristics: people would like to learn and use the language to achieve their communicative aims; they assimilate the new language if it is convenient and suitable whereas they will give up the inconvenient and sophisticated ones. This is the economy principle. Besides, to understand and produce the new language, people have to understand the environment. Schmid has found that people perceive the world from the whole, and then their attributes. Of course it depends on the context and cognitive models and cultural models. For example, in terms of the flower, Japanese people would think of Cherry blossom as the prototype, while Chinese would think of Peonies or Plum Blossoms as the prototype.

3. The Account of Arbitrariness from the Pragmatic and Cognitive View

As said above, the arbitrariness of language is controversial. What is held in this essay is that the arbitrariness is relative, not absolute. This also reflects the language's dynamic characteristic. The most important thing is that people use language to serve for certain purpose, so it is related to the physical world, which is changing. The relativity is represented in the following ways:

3.1 Words Level

There are of course many words in different language that are arbitrary. Different language has different words for same thing in the physical world, but this does not mean that they are all arbitrary. For example, iconicity is the analogy between the sign and the object. As the words, "thunder", "click", "jangle", "pang", "babble", "roar" and so on. In such words, there is a relationship between the sign and the object or concept. This is contrast to the arbitrariness. The relationship is built above their similarities between the sign and the object, like the similar sound, as the "click", the similar phoneme "k". Besides, there are also

the difference, in chinese, it is expressed "kada", not "kaka", which proves that iconicity is not contrasting completely to the arbitrariness of language. They are in fact the two aspects of the language. That is, in the words level, language is arbitrary relatively, and it is not arbitrary as people all have the inclination to use language from the cognitive experience. When they choose to use language economically, conveniently, and vividly, it is not arbitrary. Just like our chinese, people from different areas in china may speak different dialects to refer to the same thing. They think it is very easy and convenient, and it is conventional, like it or not, they speak. Shanghainess say "nin" to signify the "ren"(person). What is the reason? In terms of the pronunciation, "nin" is more labor-saving than "ren". This is our human's inclination to save the labor and to be economical.

From the pragmatic point of view, both the arbitrariness and the non-arbitrariness grow up in the language communication. Without the communion, there will be no properties at all. People try to adapt their language to the communication, and also the language shapes their mind. For example, the creation of the new words or the borrowing of the new words to their own language system, like "tycoon" from China, referring to the rich and famous merchant or entrepreneur; "Kungfu" from China, due to the master Bruce Lee's achievement; "Tea" from Southern Fujian Dialect. This borrowed words not only convey the meaning, but also communicate the Chinese culture and spirit. The words I list above are created similar to its pronunciation in Chinese. For the English speaking countries, they are borrowed, so the arbitrariness of these words is not prominent. Therefore, we can see that the language is created and used for the needs of communication. It is related to the culture as well as the cognition.

3.2 Syntax Level

Syntax involves the sequence of the words order. It is also arbitrary relatively. When one says a sentence, he always tries to organize it beforehand in you mind. This is what our common people would like to do. What is conveyed is the meaning, not the sentence itself. Sometimes, sentences' sequence is arranged in different orders, but the meaning is not affected. In this case, it can be said that the syntax is arbitrary. For example, our chinese people would like to ask "whether you have eaten" as greeting, such as "Have you eaten?" or

"you have eaten?" "eaten, have you?", which have the same meaning "greeting". Here, the position of "you" does not affect the meaning in Chinese. Another example in English, "He danced and sang." And "He sang and danced". The sequence of the "dance" and "sing" does not affect the meaning, too. They all express the two actions simultaneously. So the arbitrariness of the syntax does exist in different languages.

Of course, it is not absolute. They are opposite. For example, when one says "He worked very hard and won the award" or "He won the award and worked very hard", the changing of the position of the two verbs makes the meaning different immediately. The former means he worked hard, so he won the award. The latter means that he won the award, which encouraged him to work hard. What makes this difference? The human epistemic experience and cognition requires our language to reflect the human cognitive experience. The language also is interpreted according to the human cognition and experience. What is worth notice is that the culture weighs great influence on the language use, just like the example given above, Chinese people's greeting is so different from the westers. "eating or not" is regarded as a warm greeting. It has deep relationship with our traditional culture, in which people attach great importance to the "eating" culture. Language is also changing, nowadays, young people would like to say "hello" as greeting.

The arbitrariness and the non-arbitrariness of the syntax also reflect people's adaptation to the environment. People would like to communicate the purpose clearly and appropriately. If you greet a close friend with the sentence "how do you do", or ask the supervisor "lend me a book", they all seem to be distanced and inappropriate. So the choice of the sentence structure reflects the people's choice and adaptation to the context and the relationship. Besides, the syntactic structure also reflects the speaker's and the addressee's speech focus. Just as the prominence and attention view, people would focus on the prominent information in the sentence, against the background information. For example, "He is fired by the boss." and "The boss fired him.". The two sentence almost means the same, but they have the subtle difference in emphasis or prominence. The former makes the addressee focus on "he", and the latter on the "boss". They have the different perspective. The former sentence may

want to tell us he was pitiful because he was fired, while the latter wants to say the boss made a decision, that is dismissing him. Which sentence is used depends on the needs for communicating purpose.

3.3 Discourse Level

In the discourse level, the arbitrariness is also relative. When people try to organize a text or discourse, they will try to employ different resources and skills to make it. During this period, all the resources and skills that are conducive to the discourse purpose could be pumped out. It can be arbitrary to some extent, and also determined by the style, the purpose and the environment of the discourse.

For example, Chinadaily news 2013, 10.3, Title: Retail therapy really DOES exist - and the desire to shop could be triggered by a fear of death.

Paragraphs: *It has long been hailed as the ultimate way to let off steam by some members of the fairer sex. Now, U.S. scientists have discovered that not only does retail therapy exist, but that it could be caused by an individual's fear of sudden death. Researchers found materialistic people find terrorism and war more stressful than others - and are more likely to spend compulsively to help them cope. Psychologists believe the rise of materialism around the world and its therapeutic effect on extreme stress might be a response to fear of death caused by acts of terrorism, disease and natural disasters. The scientists from Michigan State University said people with possession obsessions often have lower self-esteem than others so are more likely splurge in the wake of severe psychological trauma...*

In order to illustrate the point that retailing or buying can alleviate the fear for death. There are many examples given by the author to illustrate the point. The examples are convincing for the reason that they are said or proved by the famous scientist or authorities. The examples are given arbitrarily from the whole text. If one example is cancelled, it does not affect the convincing influence of other examples. Besides, if the orders of this examples are changed, it will also not affect the central point. Because the order of the several authorities have no inherent hierarchy, there are no ranks in order. At the same time, the author tries to convince the reader the opinion, giving as many example as possible to prove its universality. The arbitrariness in this level can be seen as the discourse arbitrariness.

Moreover, the non-arbitrariness is symbolized in its words choices, sentence structure and discourse structure. For

example, what words should be used depends on the theme of the essay. In this text, the author wants to prove the point, so he employs many words like "said" "believed" "discovered", demonstrating others' opinion similar to him, arousing the reader's agreement. From another point, syntax, as we can see, it is a piece of news in the newspaper, different from the oral English, the formal sentence structure is preferred. In this news, the sentences are mainly formal and long, and all grammatical. From this aspect, it is not arbitrary. In a word, What should be taken into consideration is discourse style, environment and discourse purpose.

4. The Factors Affecting the Arbitrariness

Since the arbitrariness is relative, what can affect its relativity? There are three important factors, such as environment, cognition and the communicative purpose.

4.1 Environment

As we know, the arbitrariness is affected obviously by the physical world. Different countries have different signifier for the same signified, which is quiet arbitrary. However, language is related to the cultural environment, including the customs, habits, economy, social activities, etc. This makes language non-arbitrary, which also reflects the physical world. For example, nowadays, with the development of the economy and internet technology, internet languages are exploding. Many new words and sentences come out quickly and become fashionable, but the same fashion may not be the case in foreign countries. It is unique to the special culture, not to the human beings. For example, FYI (For your information), GGP (Gotta Go Pee), lol (laugh out loud), ttyl (talk to you later), s.s.s (sorry so sloppy), ty (thank you), ily (i love you), lyl (love you lots), bbl (be back later). For the economy, it is abbreviated, so as to make it more convenient to say and write. The changing of form does not cause misunderstandings, because they are gradually encoded in their culture and be integrated in people's language habits, as well as to people in other cultures. We are using the fashionable English internet language in our blogs and letters for the sake of convenience as well as communication.

The arbitrariness and non-arbitrariness also change the environment and people's mind. For example, the non-arbitrariness makes people take

environment and communication into account when speaking. People form certain rules to govern their language use. Also, the acceptance of language implies the assimilation of the new culture.

4.2 Cognitive difference

As cognitive ability involves the human experience, language learning and creating need the cognitive engagement. Language arbitrariness and non-arbitrariness are judged by human experience and knowledge of the world and language signs. The human experience and knowledge include the practice experience, the acquisition of the knowledge, and the cognition of the nature. Just as the Chinese people have the word "Peng" (Chinese) for the English word "bang", the difference for the cognition of the same sound comes from the different cognition of the sound. So to different people, they may have the different language perception. The dialect may be the case in point. The different areas have their own dialects. The people in their community can understand each other, but we can't. We can't understand it for we have no cognitive experience towards those signs and sound. The long time exposure to the environment makes the local people adapted to those environment. Therefore, the people's cognition can account for the relativity of arbitrariness in some sense.

5. Conclusion

As a conclusion, I argue that the arbitrariness of language is relatively not absolutely existing. This admits the existence of the arbitrariness, and also points out the non-arbitrariness. Factors affecting the arbitrariness include cultural environment and cognition. Of course, there are still a lot to talk about as to this topic. For example, the extent of the arbitrariness, the detailed categories of the arbitrariness and so on.

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DHCR7 Mutations Linked to Higher Vitamin D Status Allowed Early Human Migration to Northern Latitudes

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ABSTRACT

Background: Vitamin D is essential for a wide range of physiological processes including immune function and calcium homeostasis. Recent investigations have identified candidate genes which are strongly linked to concentrations of 25-hydroxyvitamin D. Since there is insufficient UVB radiation to induce year-round cutaneous synthesis of vitamin D at latitudes distant from the equator it is likely that these genes were subject to forces of natural selection. We used the fixation index (F_{ST}) to measure differences in allele frequencies in 993 individuals from ten populations to identify the presence of evolutionary selection in genes in the vitamin D pathway. We then explored the length of haplotypes in chromosomes to confirm recent positive selection.

Results: We find evidence of positive selection for *DHCR7*, which governs availability of 7-dehydrocholesterol for conversion to vitamin D₃ by the action of sunlight on the skin. We show that extended haplotypes related to vitamin D status are highly prevalent at Northern latitudes (Europe 0.72, Northeast Asia 0.41). The common *DHCR7* haplotype underwent a recent selective sweep in Northeast Asia, with relative extended haplotype homozygosity of 5.03 (99th percentile). In contrast, *CYP2R1*, which 25-hydroxylates vitamin D, is under balancing selection and we found no evidence of recent selection pressure on *GC*, which is responsible for vitamin D transport.

Conclusions: Our results suggest that genetic variation in *DHCR7* is the major adaptation affecting vitamin D metabolism in recent evolutionary history which helped early humans to

avoid severe vitamin D deficiency and enabled them to inhabit areas further from the equator.

Key Words

Evolutionary selection, Vitamin D, *DHCR7*, Fixation index, Long range haplotype test.

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Background

Vitamin D is essential in calcium homeostasis and bone health, with deficiency causing rickets and osteomalacia. In recent decades, vitamin D deficiency has also been implicated in the pathogenesis of other conditions, including cancers, autoimmune diseases, infections and cardiovascular diseases ^[1].

The main source of vitamin D is the ultraviolet irradiation of 7-dehydrocholesterol in the skin, which produces vitamin D₃ (cholecalciferol). 7-dehydrocholesterol is thus a precursor both for vitamin D₃ and for cholesterol – formation of the latter being catalysed by *DHCR7* (Figure 1). Vitamin D can also be obtained from the diet, primarily from oily fish, although dietary sources are usually inadequate for normal

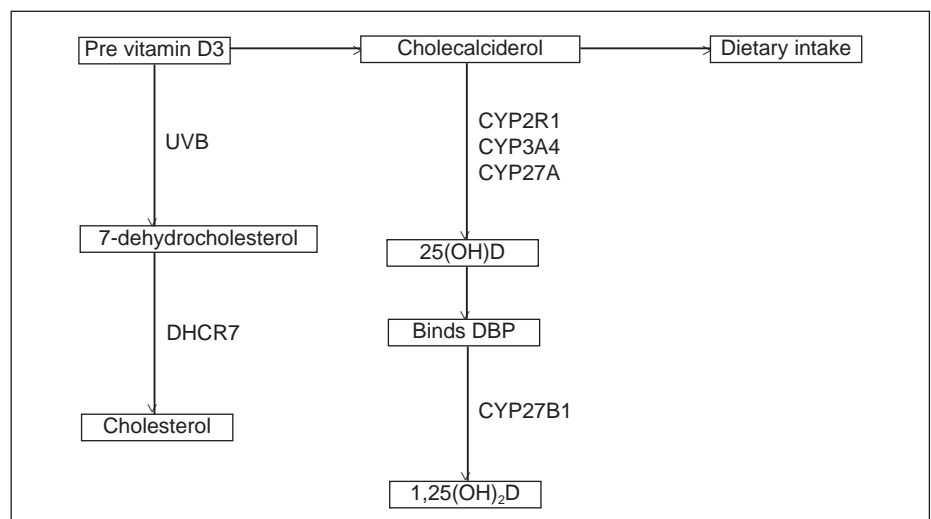


Figure 1 Metabolic pathways involving genes linked to 25-hydroxyvitamin D levels.

DHCR7 encodes 7-dehydrocholesterol reductase, which converts 7-dehydrocholesterol to cholesterol, thereby reducing availability for vitamin D synthesis in the skin. *CYP2R1* encodes 25-hydroxylase, which converts Vitamin D to 25(OH)D. *GC* encodes Vitamin D Binding Protein (DBP) which is a glycosylated alpha-globulin that transports vitamin D metabolites from the gut and skin to target end-organs. Proteins linked to 25-hydroxyvitamin D levels are indicated in bold.

requirements. Vitamin D from the skin and dietary sources is converted to 25-hydroxyvitamin D (25[OH]D), which is the major circulating vitamin D metabolite and generally used as a measure of vitamin D status^[1]. This reaction is catalysed by microsomal (CYP2R1, CYP3A4) and mitochondrial (CYP27A) 25-hydroxylases. 25(OH)D is bound to vitamin D binding protein (GC) in the circulation. Genetic variants of GC differ with respect to their affinity for 25(OH)D. This, in turn, influences the availability of 25(OH)D to cells which convert it to 1,25-dihydroxyvitamin D (1,25[OH]₂D) which is the biologically active metabolite^[2].

Exposure to UVB in sunlight is the prime determinant of serum 25(OH)D concentration, but this effect is modified by biological factors such as skin pigmentation^[3] and age-related reductions in cutaneous synthesis^[4].

Twin and family studies suggest that heritability is responsible for a significant degree of variability in 25(OH)D levels^[5,6], and recent genome-wide association studies have identified specific genes associated with 25(OH)D concentrations^[7-10]. Single nucleotide polymorphisms (SNPs) in or near three genetic loci are strongly associated with 25(OH)D levels: *GC*^[7,8,10], on Chromosome 4, which encodes Vitamin D binding protein; *DHCR7*^[7,8], on Chromosome 11, which encodes 7-dehydrocholesterol reductase; and *CYP2R1*^[7,8], on Chromosome 11, which encodes vitamin D 25-hydroxylase.

Given the pleiotropic functions of vitamin D in maintaining human health, and the established evidence for genetic influence on circulating 25(OH)D levels, we looked for evidence that vitamin D status has played a part in the adaptive evolution of humans. To this end, we searched for signals of natural selection in these three genes strongly associated with 25(OH)D levels.

Strategies for finding signatures of selection include: a) identification of a high frequency of function-altering mutations; b) a reduction in genetic diversity; c) high frequency derived alleles; d) allele frequency differences between populations; e) unusually long haplotypes^[11,12]. We focused on the latter two strategies, as these detect selective events in more recent times, and in specific populations. Thus we aimed to track the period in evolutionary history when early humans spread from Africa to northern latitudes where sunlight is more limited and cutaneous synthesis of vitamin D is

very much reduced or absent in winter months^[1].

Firstly, we investigated whether any of the markers associated with circulating 25(OH)D levels had outlying fixation index (F_{ST}) values conditional on their expected heterozygosity (H_e). F_{ST} is a commonly used statistic for measuring population differentiation; such differences in allele frequency among human populations will have accumulated after the major migrations out of Africa 50,000 to 75,000 years ago^[12]. We ranked the pairwise- F_{ST} values of individual SNPs associated with vitamin D status against those of all SNPs on the remainder of the chromosome upon which the gene was located, thereby using these remaining alleles to generate an empirical distribution of chromosome-wide F_{ST} values. This allowed us to assess the evidence for positive selection at these loci, whilst avoiding confounding by population demographic history^[13].

Next, we looked for the presence of extended haplotypes in these loci, comparing haplotype length with all core haplotypes of similar frequency on each chromosome. We evaluated the length of homozygosity of these haplotypes across extended chromosomal distances. Finally, we compared the extent of homozygosity of these haplotypes with others of similar frequency, in order to verify that the haplotypes had risen rapidly to high frequency before recombination events had time to disrupt linkage disequilibrium.

Results

Genetic markers near *DHCR7*

show signals of positive selection and marked differences in allele frequencies between populations

We used the HapMap3 (International Haplotype Map Project, Phase 3, release 2) dataset to examine 15 of the 18 SNPs significantly associated with circulating 25(OH)D levels in recent meta-analyses conducted in populations of European descent^[7]. Three of the SNPs, rs17467825, rs4945008 and rs10741657 were not in the HapMap3 dataset. The mean 25(OH)D concentrations by genotype for each SNP in the 1958 British Birth Cohort are shown in Additional file 1: Table S1.

Three SNPs near *DHCR7* - rs12785878, rs7944926 and rs3794060 - were identified as candidates for positive selection, and three near *CYP2R1* - rs2060793, rs1993116 and rs7116978 - for balancing selection using a neutrality test (Table 1). We analysed the allele frequencies of these SNPs in ten Hapmap3 populations: Africans in Southwest USA (ASW); Utah residents with ancestry from Northern and Western Europe (CEU); Chinese in Denver, Colorado (CHB); Gujarati in Houston, Texas (GIH); Japanese in Tokyo and Han Chinese in Beijing (JPT + CHB); Luhya in Kenya (LWK); Mexicans in Los Angeles (MEX); Maasai in Kenya (MKK); Tuscans in Italy (TSI); Yoruba in Nigeria (YRI) (Tables 2 and 3).

The distribution of allele frequencies was similar within each population for the three polymorphisms near *DHCR7* reflecting the strong linkage disequilibrium in this region of the

Table 1. Sample H_e and F_{ST} values at 5 *GC*, 5 *DHCR7* and 5 *CYP2R1* SNPs calculated in LOSITAN.

Loci	H_e	F_{ST}	P*
<i>DHCR7</i> SNPs			
rs3794060	0.463422	0.265612	0.997845
rs7944926	0.467318	0.25473	0.996788
rs12785878	0.467134	0.254663	0.99678
rs12800438	0.491453	0.162411	0.922132
rs4944957	0.502397	0.127569	0.794576
<i>CYP2R1</i> SNPs			
rs7116978	0.457296	0.007108	0.004184
rs2060793	0.468166	0.000742	0.001499
rs1993116	0.44101	0.021711	0.024486
rs12794714	0.434566	0.109713	0.674206
rs10500804	0.435266	0.110771	0.681743
<i>GC</i> SNPs			
rs2282679	0.306487	0.075355	0.451885
rs3755967	0.310383	0.068546	0.395229
rs1155563	0.331944	0.107236	0.671098
rs2298850	0.280963	0.094884	0.590703
rs7041	0.445035	0.142463	0.858668

*P (Simulated F_{ST} < sample F_{ST}). The outlier loci above the 0.975 and below the 0.025 quantiles are shown in bold, and indicate positive and balancing selection, respectively.

human genome. Strikingly, the major and minor alleles were reversed for all three SNPs in the Europeans (CEU and TSI) when compared to other populations. Large differences in allele frequencies between populations may signal a locus that has undergone positive selection in one geographical area.

An empirical distribution of F_{ST} values for all the SNPs on chromosome 11 in the HapMap3 dataset was constructed. The values were ranked from highest to lowest. Pairwise F_{ST} values for the *DHCR7* SNPs rs12785878, rs7944926 and rs3794060 between the European and African, and the European and Gujarati populations were above the 95th percentile relative to 70,973 SNPs on Chromosome 11. F_{ST} values were also above the 95th percentile for ASW vs LWK and ASW vs MKK at rs7944729 (Tables 4 and 5). Such high F_{ST} values can be generated when the direction or strength of selection differs among populations.

Haplotype analysis suggests that *DHCR7* markers linked to high vitamin D status have undergone positive selection in Northeast Asia

Another signal of a recent selective sweep is a long chromosomal region with strong linkage disequilibrium around the selected site. This large haplotype block was observed in the European, Northeast Asian, Mexican and Gujarati populations (Figure 2). The block, which varied between 63 kb and 102 kb, depending on the specific population, included all five SNPs associated with vitamin D status near *DHCR7* (rs7944926, rs12785878, rs12800438, rs4944957 and rs3794060). This was in contrast to the African populations, which had more haplotype blocks that were shorter, and no block contained all five SNPs (Figure 2). This observation indicates that the underlying haplotype structures in this region and the evolutionary forces driving these structures are different between the African and other populations, with

the rate of recombination (compared to genetic drift) being higher in Africans.

A signature of positive selection is indicated by unusually long haplotypes and high population frequency^[14]. Long range haplotypes persist for relatively short periods of time, since, after 30,000 years random recombination events tend to break down the haplotype, leaving fragments that are too short to detect^[12]. We therefore next employed a long range haplotype test –Extended Haplotype Homozygosity (EHH), to assess whether these alleles had risen in prevalence so rapidly that there had been insufficient time for recombination to break down linkage disequilibrium with alleles at neighbouring loci^[14].

A core region was defined, comprising 17 adjacent SNPs in *DHCR7* and a neighbouring gene *NADSYN1* (rs7944926, rs12785878, rs1792316, rs4944957, rs12280295, rs12285168, rs2276360, rs12800438, rs2276362, rs1629220, rs1792225, rs1792226,

Table 2. Allele frequencies of *DHCR7* SNPs identified as having undergone positive selection in ten Hapmap populations.

SNP	Allele	Allele frequencies									
		ASW	CEU	CHD	GIH	JPT + CHB	LWK	MEX	MKK	TSI	YRI
rs3794060	C	0.711	0.274	0.587	0.832	0.589	0.941	0.612	0.923	0.225	0.884
	T	0.289	0.726	0.413	0.168	0.411	0.059	0.388	0.077	0.775	0.116
rs7944926	A	0.684	0.277	0.587	0.832	0.584	0.941	0.612	0.92	0.223	0.844
	G	0.316	0.723	0.413	0.168	0.416	0.059	0.388	0.08	0.777	0.156
rs12785878	G	0.684	0.274	0.587	0.832	0.586	0.941	0.612	0.92	0.225	0.844
	T	0.316	0.726	0.413	0.168	0.414	0.059	0.388	0.08	0.775	0.156

Table 3. Allele frequencies of *CYP2R1* SNPs identified as having undergone balancing selection in ten Hapmap populations.

SNP	Allele	Allele frequencies									
		ASW	CEU	CHD	GIH	JPT + CHB	LWK	MEX	MKK	TSI	YRI
rs3794060	T	0.395	0.363	0.352	0.411	0.349	0.359	0.397	0.23	0.297	0.333
	C	0.605	0.637	0.648	0.589	0.651	0.641	0.603	0.77	0.703	0.667
rs2060793	A	0.412	0.394	0.352	0.431	0.347	0.367	0.414	0.305	0.343	0.342
	G	0.588	0.606	0.648	0.569	0.653	0.633	0.586	0.695	0.657	0.658
rs1993116	A	0.289	0.398	0.347	0.426	0.348	0.2	0.397	0.212	0.338	0.245
	G	0.711	0.602	0.653	0.574	0.652	0.8	0.603	0.788	0.662	0.755

Table 4. Pairwise F_{ST} values for rs1279187 and rs7944926.

	GIH	LWK	MKK	YRI
ASW	not significant	0.20 (95.8th)	0.20 (97.3rd)	not significant
CEU	0.47 (98.1st)	0.61 (99.5th)	0.62 (99.9th)	0.48 (97.2nd)
TSI	0.52 (99.9th)	0.66 (99.7th)	0.67 (99.9th)	0.53 (98.9th)

Table 4. Pairwise F_{ST} values for rs3794060.

	GIH	LWK	MKK	YRI
ASW	not significant	0.17 (95.6th)	0.18 (97.1st)	not significant
CEU	0.47 (98.1st)	0.61 (99.5th)	0.63 (99.9th)	0.53 (98.6th)
TSI	0.52 (99.9th)	0.66 (99.7th)	0.68 (99.9th)	0.58 (99.2nd)

Table 6. Allele frequencies of *CYP2R1* SNPs identified as having undergone balancing selection in ten Hapmap populations.

Core haplotype	Core alleles	Allele frequencies					
		CEU	CHD	GIH	JPT + CHB	MEX	TSI
DHCR7-CH1	GTCGTGCAGCCCCTCT	0.717	0.406	0.165	0.406	0.4	0.75
DHCR7-CH2	AGCATGGGATCTGCCCC	0.212	0.388	0.472	0.406	0.29	0.205
DHCR7-CH3	AGAATGGGACTCACCTC	0	0.141	0.352	0.109	0.3	0.028
DHCR7-CH4	AGCATGGGACCCACTCC	0	0.047	0	0.074	0	0

Core alleles refer to those of the seventeen SNPs in order from left to right: rs7944926, rs12785878, rs1792316, rs4944957, rs12280295, rs12285168, rs2276360, rs12800438, rs2276362, rs1629220, rs1792225, rs1792226, rs1792229, rs7131218, rs2282621, rs2186778, rs3794060.

rs1792229, rs7131218, rs2282621, rs2186778 and rs3794060). This core region included the five SNPs associated with circulating 25(OH)D levels, in addition to nonsynonymous coding variants in *NADSYN1*. In none of the African populations – ASW, LWK, MKK or YRI – could a haplotype block comprising these seventeen SNPs be formed, reinforcing the suggestion of relatively high effects of recombination in these populations. For the other six populations, the 17 SNPs defined four core haplotypes denoted *DHCR7-CH1* to 4 for core haplotypes 1 to 4 (Table 6).

For each core haplotype the relative EHH (REHH) was calculated. REHH is the factor by which EHH decays on the core haplotype compared with the decay of EHH on all the other core haplotypes combined. Haplotypes were placed in 20 groups based on their frequency, at 5% intervals. The significance of the REHH values was assessed by comparing their percentiles within these 5% frequency groups for all possible core haplotypes on Chromosome 11. The REHH value at 0.25 cM for *DHCR7-CH1* was 4.90 (99th percentile of core haplotypes within 5% of its frequency) for CHD, and 5.03 (99th percentile of core haplotypes within 5% of its frequency) for JPT + CHB (Figure 3).

Genetic variants in vitamin D binding protein (GC) and 25 hydroxylase (*CYP2R1*) show no evidence of recent evolutionary selection

F_{ST} analysis for SNPs near *CYP2R1* showed F_{ST} values below the 2.5% quantile compared to all other SNPs on the chromosome, an effect which could be produced by balancing selection. However, long-range haplotype analysis found no evidence for recent selective sweeps in any HapMap3 population for the core haplotypes containing the SNPs associated with vitamin D status. None of the SNPs in GC associated with circulating 25 (OH)D levels showed evidence of selection in either F_{ST} or long range haplotype analysis.

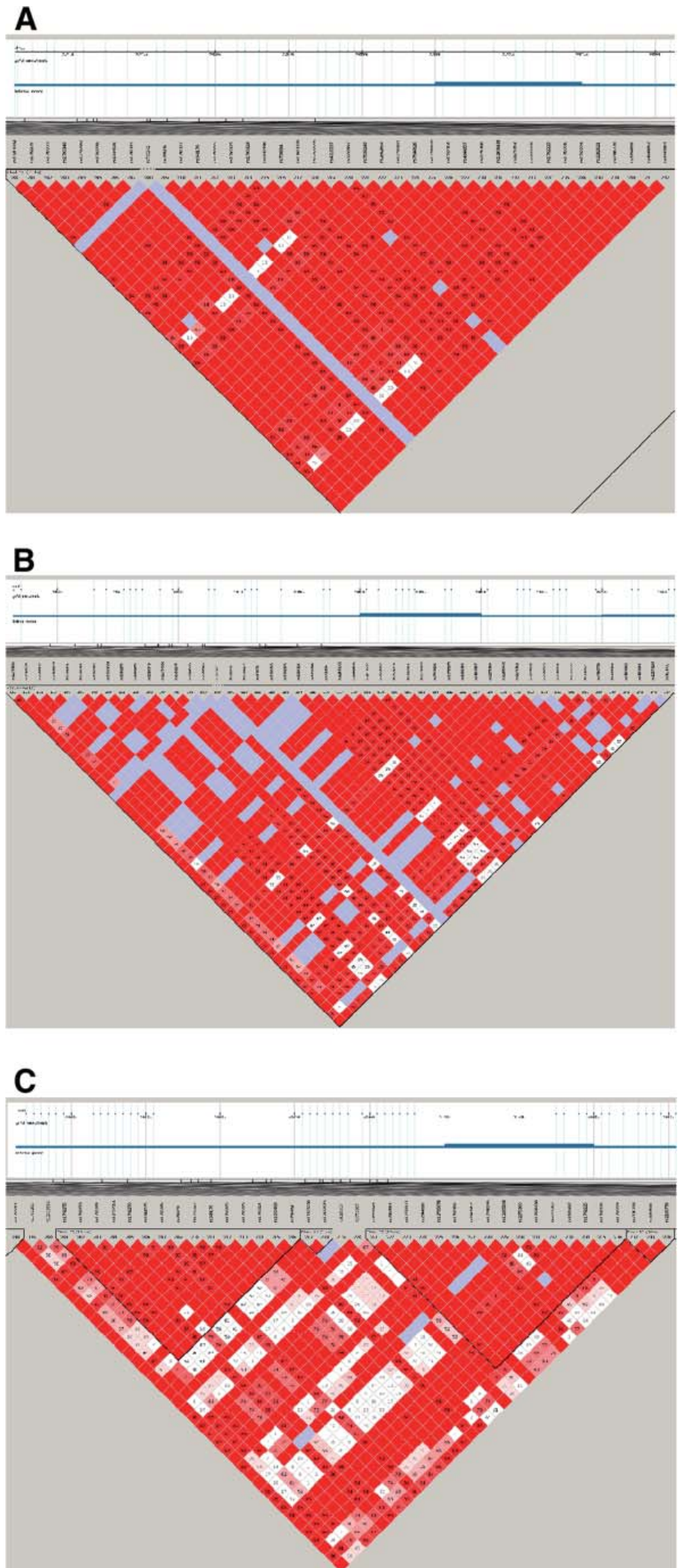


Figure 2 Linkage disequilibrium of SNPs in and around *DHCR7* and *NADSYN1* for **A)** JPT + CHB, **B)** CEU and **C)** YRI. The numbers within each square indicate the D' values. Squares are colour-coded as follows: white: $D' < 1$, $LOD < 2$; blue: $D' = 1$, $LOD < 2$; pink: $D' < 1$, $LOD \geq 2$; and bright red: $D' = 1$, $LOD \geq 2$.

Discussion

We searched for evidence of positive evolutionary selection in genetic variants strongly linked to higher circulating 25(OH)D levels in recent, large-scale genome-wide association studies^[7-10]. We now show for the first time unique signatures of recent positive selection at the *DHCR7* genetic locus. The same haplotype carrying these polymorphisms has risen to very high frequencies in both Europe (0.72) and in Northeast Asia (0.41). *DHCR7* converts 7-dehydrocholesterol, which is a precursor for Vitamin D, into cholesterol. Thus reduced activity variants of *DHCR7* would increase the availability of 7-dehydrocholesterol for cutaneous vitamin D synthesis. This implies that *DHCR7* mutations associated with higher vitamin D status conferred a survival advantage which allowed early humans to avoid severe deficiency when migrating to northern latitudes.

Rare loss-of-function mutations

in *DHCR7* have been previously described and are associated with Smith-Lemli-Opitz syndrome (SLOS), in which affected homozygous individuals have greatly elevated serum 7-dehydrocholesterol levels and correspondingly low serum cholesterol^[15]. It has previously been suggested that these rare variants might confer a survival advantage to heterozygotes by increasing 7-dehydrocholesterol availability and hence vitamin D synthesis^[15].

One suggested mechanism by which this might occur is reduction in cephalopelvic disproportion due to rickets which in the past was a common cause of obstructed labour^[16]. Low vitamin D status is also associated with low sperm count in men and with disorders of ovulation in women^[17]. In addition to these effects on reproductive fitness, mortality from infectious diseases, particularly those affecting children and young adults could be a powerful selective force. Examples of such diseases linked to low vitamin D status have been

clearly demonstrated in archaeological specimens from *Homo erectus* engaged in northerly migration^[18].

Here we show that highly prevalent polymorphisms with a much smaller effect on 25(OH)D levels than those causing SLOS may nevertheless have exerted a strong selective force in human evolution by similar mechanisms. Whilst lower cholesterol levels arising from reduced *DHCR7* activity may be advantageous in reducing the risk of heart disease and stroke, these effects are seen in later life and hence less likely to be a selective force in evolution. Thus vitamin D status rather than cholesterol level is more likely to be a driving force for natural selection.

Despite the higher prevalence of alleles associated with increased 25(OH)D levels in Europeans compared to other populations including Northeast Asians, a detailed examination of *DHCR7* haplotype homozygosity found no evidence of a recent selective sweep in Europeans. However, REHH for the haplotype associated with higher 25(OH)D levels was significant when compared to other SNPs of similar frequency on chromosome 11 in the Northeast Asian populations. The significant pairwise F_{ST} values between European and non-European populations suggest that there was an evolutionary drive in European populations for an allele which increased circulating 25(OH)D levels more than 70,000 years ago, but that the mutation did not achieve fixation. Although pairwise F_{ST} values between Northeast Asian and other populations were not significant, the finding of significant REHH values in Northeast Asian populations suggest that a selective event subsequently occurred approximately 30–50,000 years ago.

This suggests that mutations associated with higher vitamin D status were positively selected at higher latitudes in both continents over different periods due to a variety of environmental pressures, as they proffered an evolutionary advantage. These genetic variants then rose quickly to high frequencies in humans living in areas distant from the equator.

The differences in timing of the selective events between the European and Northeast Asian populations may in part reflect the diets of the respective populations in the late Pleistocene and early Holocene. The inhabitants of Europe during this period are thought to have had a diet that was rich in mammal and fish meat, which have a

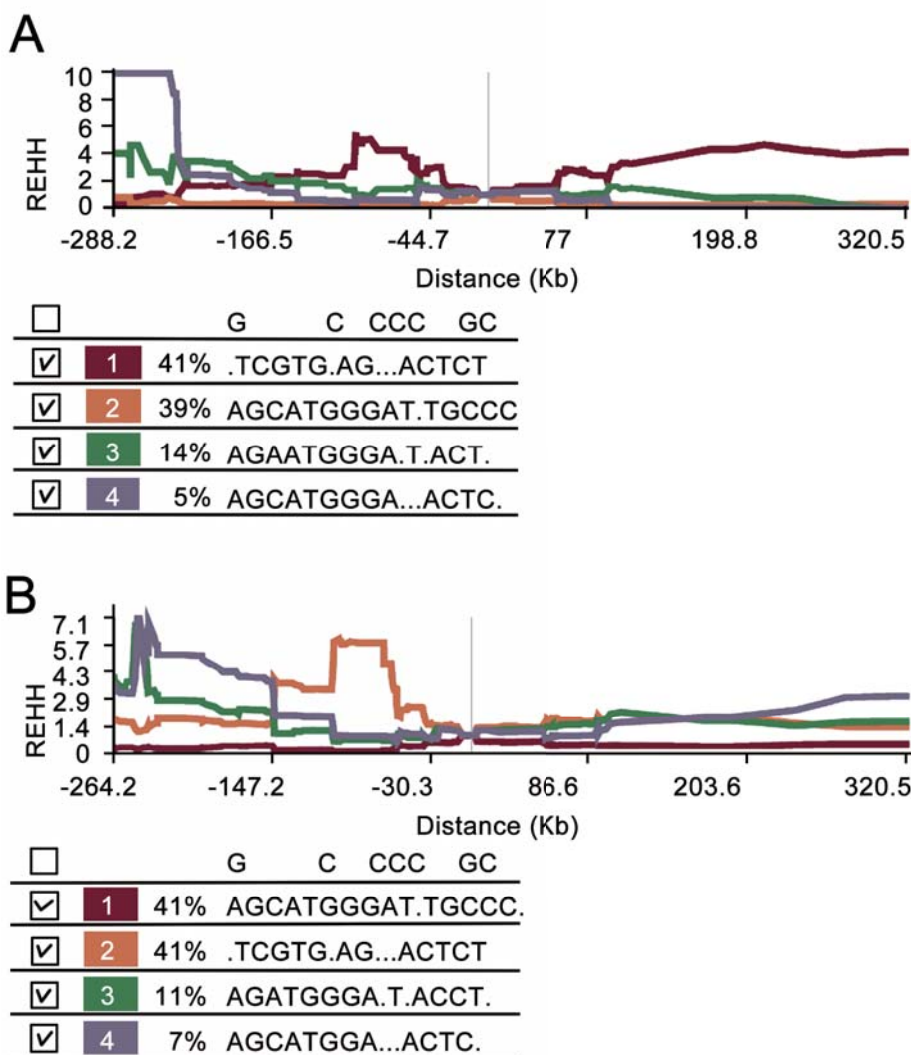


Figure 3 Long range haplotype analysis of *DHCR7/NADSYN1* core haplotypes.

REHH versus genomic distance plots of *DHCR7*-CH1 to CH4 for **A**) CHD and **B**) JPT + CHB are shown.

high vitamin D content^[19-21]. In East Asia, in contrast, plant foods may have become increasingly important in the human diet with intensive exploitation of certain types of flora^[22,23]. The comparatively vitamin D-rich diet of the European inhabitants at this time may be the reason the *DHCR7* mutation did not reach fixation, while the low vitamin D content in the diet of the East Asians may have added to the selection pressure on *DHCR7* over this period.

7-dehydrocholesterol is found in high concentrations in the epidermis^[24]. Chen, et al. showed that the conversion of epidermal 7-dehydrocholesterol in hypopigmented skin is much more efficient than in highly pigmented skin. This suggests that sufficient previtamin D3 can be synthesized in Caucasians but not in people with heavily pigmented skin after a brief exposure to summer noon sunlight even at high latitudes^[25]. Dependency upon sunlight for vitamin D synthesis may also explain why 7-dehydrocholesterol levels are three to eight times higher in non-feathered skin areas of birds such as the legs and feet when compared to body skin which is covered with feathers^[26].

These studies show that humans and animals have adapted mechanisms to exploit optimal methods of synthesizing vitamin D in response to their environment. The increased frequencies of *DHCR7* alleles associated with higher vitamin D status in the hypopigmented populations of Europe and Northeast Asia may represent yet another adaptation which conferred a survival advantage allowing early humans to avoid severe deficiency when migrating to northern latitudes.

Ethnic differences in vitamin D status have long been recognised^[27-30], although the evolutionary factors responsible for the biological differences have not been elucidated. *SLC24A5*, a gene associated with skin pigmentation, shows clear evidence of adaptive selection in those of European ancestry but interestingly is not associated with vitamin D status in recent genome wide association studies^[31,32]. This highly unexpected finding may suggest that factors other than vitamin D status are driving natural selection on the basis of skin colour. However vitamin D genome-wide analyses to date have been conducted mainly in European populations and thus the full range of *SLC24A5* genotypes may not have been fully explored.

The three genes that we studied

contribute a relatively modest proportion of the variation in circulating 25(OH)D levels and of these only *DHCR7* shows marked differences in allele frequencies across populations. Whilst these small differences in vitamin D status appear to be sufficient to drive processes of natural selection, it seems likely that other important genetic mechanisms are still to be discovered, some of which may involve interactions between genes. Environmental factors such as sun exposure, latitude and diet will clearly play an important part and may also interact with genetic influences on vitamin D status^[33].

With the exception of rs7041 in GC, the SNPs identified in the genome-wide association studies as being associated with vitamin D status are found in non-coding regions of the genome. These regions may exercise regulatory functions on relevant genes or alternatively the polymorphisms identified may be in linkage disequilibrium with neighbouring functional polymorphisms^[34,35]. Further studies are required to determine how these polymorphisms effected the association with vitamin D status.

Because of the strong linkage disequilibrium in this genomic region it is possible that the positive selection that we detected relates not to the *DHCR7* gene, but to *NADSYN1*, which is situated close to *DHCR7* in the genome and was included in the core haplotype. *NADSYN1* encodes NAD synthetase, an enzyme that catalyzes the final step in the biosynthesis of nicotinamide adenine dinucleotide (NAD) from nicotinic acid adenine dinucleotide (NaAD). NAD is an important cofactor in redox reactions and is also involved in post-translational modification of proteins; however there is no known biological connection between this gene and vitamin D metabolism.

It is notable that whilst the major alleles for SNPs in GC and *DHCR7* are associated with higher 25(OH)D levels in Europeans, the opposite was true for four of the SNPs near *CYP2R1* (Additional file 1: Table S1). This makes the suggestion of balancing selection acting near the *CYP2R1* locus plausible, although the biological reasons for this are unclear.

Neither GC nor *CYP2R1* showed evidence of positive selection in our analysis. One explanation for this may be that selection in the GC or *CYP2R1* genes took place earlier than that in the *DHCR7* gene, and hence was not detected by the methods used in this study. Alternatively, it may be the level

of vitamin D3 rather than 25(OH)D that influences survival and brings about evolutionary selection. If this were the case, then the availability of 7-dehydrocholesterol to promote synthesis of vitamin D in the skin would be more important than 25 hydroxylase activity or the contribution of D binding protein (Figure 1). Whilst this conclusion would be contrary to most current opinion there is some evidence that 25-hydroxylation may occur in a range of target tissues^[36,37].

Conclusions

This observation of positive evolutionary selection highlights the physiological importance of vitamin D in humans and sheds new light on the crucial role of *DHCR7* in the synthetic pathway. The finding that the same molecular variant is selected in both northern Europe and Northeast Asia is highly unusual and strengthens the argument that individuals with low *DHCR7* activity had a survival advantage at northern latitudes despite variations in other environmental factors in different continents. The unique signal of evolutionary selection, amongst all the genetic variants linked to higher 25(OH)D levels, points to the primacy of *DHCR7* amongst the vitamin D synthetic enzymes and will help to direct future research towards a hitherto neglected area of vitamin D metabolism.

Methods

Genotype data

Phased genotype data were obtained from release 2 of the HapMap 3 dataset^[38]. Only paired chromosomes were studied. These were from 993 individuals: 53 of African ancestry in Southwest USA (ASW); 113 from Utah with Northern and Western European ancestry from the Centre d'Etude du Polymorphisme Humain (CEPH) collection (CEU); 85 from the Chinese population in Metropolitan Denver, Colorado (CHB); 88 from the Gujarati population in Houston, Texas (GIH); 170 from the Japanese population in Tokyo and the Han Chinese population in Beijing (JPT + CHB); 90 from the Luhya population in Webuye, Kenya (LWK); 50 of Mexican ancestry in Los Angeles (MEX); 143 from the Maasai population in Kinyawa, Kenya (MKK); 88 from the Tuscan population in Italy (TSI); and 113 from the Yoruba

population in Ibadan, Nigeria (YRI).

F_{ST} vs. heterozygosity

An F_{ST}-outlier detection approach^[39] using the LOSITAN^[40] software package was implemented to identify SNPs which may have undergone positive or balancing selection. The expected distribution of Wright's inbreeding coefficient, F_{ST}, against the expected heterozygosity, H_e, was constructed under an island model of migration with neutral markers. This was used to identify outlier loci with excessively high or low F_{ST} compared to neutral expectations, which would be candidates for selection. 10,000 simulation replicates were used (infinite allele model) for a sample size of 993 individuals.

Pairwise F_{ST}

Pairwise F_{ST} values to assess population differentiation were calculated as described by Weir and Cockerham with Nei's correction for sample size^[41-43] between the ten populations. Values were ranked from highest to lowest, with those above the 95th percentile regarded as significant.

Haplotype block definition

Haplotype blocks were constructed using the LD-based empirical block definition proposed by Gabriel, et al.^[44] Haploview 3.0^[45] was used to estimate and v the detailed blocks and their underlying haplotype structure.

EHH and REHH

The EHH statistic uses the decay of linkage disequilibrium to estimate the age of the haplotypes. It is defined as the probability that any two randomly chosen chromosomes carrying a particular core haplotype have the same extended haplotype from the core region to a distance x. The relative EHH (REHH), which compares the EHH of a core haplotype to that of other core haplotypes at the same locus, corrects for local variation in recombination rates^[14]. EHH and REHH values were calculated for core regions which contained the SNPs of interest.

The significance of REHH was tested using empirical data from the HapMap3 dataset of the entire chromosome on which the core region was situated. REHH values were calculated for core haplotypes in all haplotype blocks for the relevant chromosome. The haplotypes were then placed into 20 bins based on their frequency. Analysis was carried out using Sweep software (Varilly P, Fry B, and Sabeti P, <http://www.broadinstitute.org/mpg/sweep/>).

1958 Birth cohort

Serum 25(OH)D concentrations were measured using an automated IDS OCEIA enzyme-linked immunosorbent assay (ELISA) (Dade-Behring BEP2000 analyzer), standardized according to the mean from Vitamin D External Quality Assessment Scheme (DEQAS)^[46]. Genetic data for the cohort were obtained from by Affymetrix 6.0 and Illumina 550 K Infinium methods from two genome wide sub-studies (Wellcome Trust Case-control Consortium 2 and Type 1 Diabetes Genetics Collaboration)^[47,48].

Abbreviations

ASW: African ancestry in Southwest USA; CEU: Utah residents with Northern and Western European ancestry from the CEPH collection; CHD: Chinese in Metropolitan Denver, Colorado; cM: centiMorgan; EHH: Extended haplotype homozygosity; GIH: Gujarati Indians in Houston, Texas; GWAS: Genome wide association study; JPT + CHB: Japanese in Tokyo, Japan + Han Chinese in Beijing, China (MERGED); LWK: Luhya in Webuye, Kenya; MEX: Mexican ancestry in Los Angeles, California; MKK: Maasai in Kinyawa, Kenya; REHH: Relative extended haplotype homozygosity; SNP: Single nucleotide polymorphism; TSI: Tuscans in Italy; YRI: Yoruba in Ibadan, Nigeria (West Africa).

Additional File

Additional file 1: Table S1. Geometric mean of 25-hydroxyvitamin D by SNP genotypes in the 1958 British Birth Cohort (n = 5,233).

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Ethics For Legal Profession in India

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ABSTRACT

Legal ethics may be taken to mean the body of rules and practice which determine the professional conduct of members of bar. The very first purpose and aim of legal ethics is to maintain the dignity and honour of the law profession. In India to maintain the honor of legal profession, the Advocate Act 1961 has been passed and established Bar Councils. Under section 49 (1) (c) of Advocates Act breach of Advocates duties codified in regard to the Professional and other misconduct. So a lawyer should be clear in expressing his views and should understand that it is not enough for him alone to understand that his client is right but to prove it to the judge and to the others concerned with the case. A successful lawyer stands by his point and does not easily agree to statements made against his client. In handling the opponent's tricky questions to make a lawyer disagree with his own client, a lawyer must be alert and tackle the situation smartly, thus having people think in his favor. A successful lawyer must have quick thinking to handle difficult situations in the court.

Key Words

Lawyer, Court, Justice, Morality, Ethics.

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1. Introduction:

The legal profession plays an important role in the Administration of justice. But it is a common proverb that to become a lawyer, the only quality one needs to possess is to know to lie. But when an innocent victim wants justice it is these lawyers who go out of their way to prove their point and get them justice. So at this point its not lying which makes the lawyer a winner but his ability to stand for the truth, understand case wholly, analyze every situation and being tactful enough to handle the opponent ^[1]. So what really makes a lawyer successful? Of course the necessary education qualifications required to become a lawyer is first and foremost important. Also, the proper understanding of the legal system by the lawyer, of the place where he is practicing his profession, is also very important. A good lawyer must himself be well aware of what is right and lawful and what is permissible by law and what is punishable by law. Apart from these obvious requirements the other necessary quality for a lawyer to become successful is the interest that a lawyer should take in the matter at his hand. A successful lawyer should get down to listening to what the client has to say and take it seriously. He never treats any issue as small or secondary, as even a small victory can add to the tag of a successful lawyer. A lawyer needs to have the will power and determination to solve any task taken up by him to be successful. A lawyer must come across as a confident person who would do everything it takes to prove his point and is also determined at doing it. Only then will a client have

his full trust and confidence in the lawyer and entrust him with all the details of the case which will help win it. Ability to analyze all the aspects related to a case so as to have thorough knowledge of what the lawyer is fighting for is also necessary. If required, a lawyer must be bold enough to move forward and carry on interrogations with people connected to the case and ask for necessary documents or other materials as proof to prove the client innocent. A good reasoning power to reason out the case at hand is also very necessary.

A lawyer should be clear in expressing his views and should understand that it is not enough for him alone to understand that his client is right but to prove it to the judge and to the others concerned with the case. A successful lawyer stands by his point and does not easily agree to statements made against his client. In handling the opponent's tricky questions to make a lawyer disagree with his own client, a lawyer must be alert and tackle the situation smartly, thus having people think in his favor. A successful lawyer must have quick thinking to handle difficult situations in the court.

Law firms in Kelowna have some of the best lawyers; these Kelowna lawyers offer amazing services to their clients and help them get full justice. Law firms in Penticton also strive to give the best services to their clients. The Penticton lawyers offer a wide variety of services and see to it that the customers are all satisfied. By possessing these qualities and working in the best interest of clients, a lawyer is sure to become successful in his career. ^[2]

2. ETHICS FOR LEGAL PROFESSION:

Legal ethics may be defined as a code of conduct written or unwritten for regulating the behavior of a practicing lawyer towards himself, his client, his adversary in law and towards the court. Thus, ethics of legal profession means the body of the rules and practice which determine the profession means the body of the rules and practice which determine the professional conduct of the members of bar. When a person becomes an advocate his relation with men in general is governed by the special rules of professional ethics of the bar. The main object of the ethics of the legal profession and the friendly relation between the Bench and Bar. Chief Justice Marshall has observed:

“The fundamental aim of Legal Ethics is to maintain the honour and dignity of the Law Profession, to secure a spirit of friendly cooperation between the Bench and the Bar in the promotion of highest standards of justice, to establish honourable and fair dealings of the counsel with his client opponent and witness; to establish a spirit of brotherhood in the Bar itself; and to secure that lawyers discharge their responsibilities to the community generally.”^[3]

Legal profession is not a business but a profession. It has been created by the state for the public good. Consequently, the essence of the profession lies in the three things:

1. Organization of its members for the performance of their function;
- 2 Maintenance of certain standards, intellectual and ethical, for the dignity of the profession; and
3. Subordination of pecuniary gains to efficient service.^[4]

Section 49 (1) (c) of the Advocates Act, 1961, empowers the Bar Council of India to make rules so as to prescribe the standards of professional conduct and etiquette to be observed by the advocates. It has been made clear that such rules shall have effect only when they are approved by the Chief Justice of India. It has also been made clear that any rules made in relation to the standards of professional conduct and

etiquette to be observed by the advocates and in force before the commencement of the Advocates (Amendment) Act, 1973, shall continue in force, until altered or repealed or amended in accordance with the provisions of this Act.⁵In the exercise of the rule making power under Section 49 (1) (c) of the Advocates Act, 1961, the Bar Council of India has been made several rules so as to prescribe the standards of professional conduct and etiquette to be observed by the Advocates. Chapter II of Part VI of the rules framed by the Bar Council of India deals with the standards of professional conduct and etiquette. It contains several rules which lay down the standards of professional conduct and etiquette. These rules specify the duties of an advocate to the Court, client, opponent and colleagues, etc. However from the Preamble it becomes clear that these rules contain canons of conduct and etiquette adopted as general guides and the specific mention thereof should not be construed as a denial of the existence of other equally imperative, though not specifically mentioned.

3. IMPORTANCE OF LEGAL PROFESSION

The legal profession plays an important role in the administration of justice. The lawyer assists the Court in arriving at a correct judgment. The lawyer collects legal materials relating to the case and thereby helps the Court or Judge to arrive at a correct judgment. Without the assistance of the lawyer it would be a superhuman task for the judge to arrive at a satisfactory judgment. Justice P.N. Saprú^[6] has stated that the justification for the existence of counsel is that each side to the controversy should be in a position to present its case before an impartial tribunal in the best and most effective manner possible.

Actually the law is very complicated. The language of Acts and Regulations is often found to be very complicated and confusing and not easy to be understood. The citizens of the country require the advice of the advocate to understand the exact meaning of the provisions of the Act and Regulations. In the case of Madhav Singh^[7] the court

observed that advocates and pleaders are enrolled not only for the purpose of rendering assistance to the courts in the administration of justice but also for giving professional advice for which they are entitled to be paid by those members of the public who require their services. The lawyers are not puppets compelled to obey the dictate of their clients, where matters of good faith and honourable conduct are concerned. They are responsible to the court for the fair and honest conduct of a case. They are agents not of man who pays them but are acting in the administration of justice.^[8] The lawyers play important role in the maintenance of peace and order in the society. The peace and order, no doubt, are necessary for the very existence of the society. Learned C.L. Anand^[9] has rightly stated that the advocates share with the judges the responsibility for maintaining order in the community. They do not promote stripes but settle them. They stand for legal order which is one of the noblest functions in the society. Order which advocate seeks is not order of grave. It is order based on justice. Justice is the highest thing desired by men on earth. It is the function of advocates to plead for legal justice for their clients or decision of disputes according to the law. He has stated further that rights and liberties are the creation of law and are subject to limitations imposed by the law. Advocates are every day defending rights and liberties of citizens against all violators of the law.^[10]

The lawyers play important role in the law reform also. “By reason of the experience gained in the daily application and interpretation of laws, lawyers are best aware of the imperfection, of the legal system and constitute the most competent class of men to advise on law reform and to promote popular enthusiasm and support for it. The most difficult part of the process of legislation in the drafting of its provisions and no one is better fitted to give guidance on this than the lawyers.”

4. ACCOUNTABILITY OF ADVOCATES

The advocate has been made

accountable. Section 35 of the Advocates Act that where on receipt of a complaint or otherwise a State Bar Council has reason to believe that any advocate on its roll has been guilty of professional or other misconduct, it shall refer the case for disposal to its disciplinary committee can punish the advocates for the professional or other misconduct. Where on receipt of complaint or otherwise the Bar Council of India has reason to believe that any advocate whose name is not entered on any State Roll has been guilty of professional or other misconduct, it shall refer the case for disposal to its disciplinary committee. This committee can punish the advocate for such misconduct. The 'professional or other misconduct' includes the breach of duties specified by the rules made by the Bar Council of India.

The breach of duty has, thus, been made punishable. The order of the disciplinary committee of the State Bar Council may be challenged in appeal before the Bar Council of India and the order of the disciplinary committee of the Bar Council of India may be challenged in appeal before the Supreme Court.^[11]

5. A SUCCESSFUL ADVOCATE SHOULD FOLLOW CERTAIN GUIDLINES

Now-a-days it is often that the legal profession has no future. It is overcrowded and usually those persons join this profession who do not get other job. But this view is not correct in relation to the persons who join this profession keeping in mind that they are to devote their whole time to this profession. For a person who is hardworking and devoted to law has a bright future.^[12]

Actually good command over the language, good voice, good power of expression, good knowledge of the law, good commonsense, good presence of mind and good health all help alawyer to become over the temper is also necessary for becoming a popular and successful lawyer.^[13]

Mr. Justice R.C. Laboti has given the following tips to be a successful advocate:

1. Work hard: There is no royal road to success in profession. In law, to earn

success, one has to live like hermit and work like a horse.

2. Be physically fit: The law graduates who join the legal profession must have a sound physique and healthy body to bear the burden of higher responsibilities and facing the challenges of the strenuous profession.

3. Value the time: In legal profession time, talent and wisdom are marketable commodities. They are displayed in the show case and purchased by one who can afford to pay the price. Just as raw material has to be preserved and can be available for producing the finished product so in legal profession time has to be saved for utilization in delivering the finished product.

4. Knowledge of English language: While the students should enrich themselves in their mother tongue they should not lag behind in learning English and should rather acquire good command over it which holds so much of promise for them. English has become the Chief Global language. The only language known to computers in the world around, is English.

5. Read literature: Reading literature gives width to vision. There is so much to read in law that one life may not be enough to complete reading the available literature I law. The books available in law consist of fundamentals of law, jurisprudential thoughts, legal research and biographies and autobiographies of eminent judges and lawyers. It is inspiring to read them.

6. Knowledge of Computers: Computers are indispensable and therefore the students must learn computer.

7. Develop a hobby: Every professional must have a hobby to divert and entertain himself and get rid of monotony.

8. Look smart: A professional should try to look as attractive as he can. "Always bear a smile on your face and try to look as attractive as you can. An astute client would access your worth in the first meeting and decide upon retaining you as his lawyer feeling impressed initially by your appearance and the impact of your personality."

9. Aim high: One who aims high should not feel diffident by the crowd in

profession.

6. Conclusion:

Thus, to sum up the legal profession is a profession of great honour. It has been created not for private gain but for public good. It is not a money making occupation but a branch of administration of justice. Since it is not a business, a lawyer cannot solicit work or advertise either directly or indirectly. An advocate is an officer of the Court and required to maintain towards the Court a respectful attitude bearing in mind that the dignity of the judicial office is essential for the survival of the society. The Supreme Court has rightly observed that the legal profession is a partner with the judiciary in the administration of justice.^[14]

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Nursing Students' Perception and Experience of Bullying Behavior in the Faculty of Nursing

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ABSTRACT

Background: Workplace bullying, a serious issue affecting the nursing profession, is defined as any type of repetitive abuse in which the victim of the bullying behavior suffers verbal abuse, threats, humiliating or intimidating behaviors that interfere with his or her job performance and are meant to place at risk the health and safety of the victim.

Aim: The aim of the study was to assess nursing students' perception and experience of bullying behavior in the faculty of nursing of Tanta University.

Material and methods: Descriptive study design used a questionnaire survey short version of the Negative Acts Questionnaire that adapted according to the earlier studies on bullying against nursing students particularly those conducted by Cooper et al. and Celik and Bayraktar design to assess bullying behaviors by nursing faculty. The study conducted in Faculty of Nursing at Tanta University in Egypt. The sample was approximately 400 undergraduate students. The study was done during the academic year 2012-2013, in April month.

Results: high percent of students 66% never exposure to threats of violence or physical abuse or actual abuse, high percent of students 66.8% sometimes and 19.5% frequently exposure to Being shouted at or being the target of spontaneous anger (or rage) also high percent 43% of students always exposure to behavior of Negative and disparaging remarks about nursing's profession, and exposure to be shouted

at or be the target of spontaneous anger (or rage) by nurse, patients and faculty employee of faculty 48.8 %, 34.3% and 42% respectively.

Conclusion: Nursing students were exposed to bullying behaviors in both the practice settings and the educational settings.

Recommendation: Encourage strategies to increase students' awareness of this problem with bullying and its potential consequences and coping measures with bullying behavior.

Key Words

Bullying behavior, Perception, Nursing students.

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1. Introduction:

Bullying is now recognized as a pervasive and disturbing the workplace phenomenon, with significant costs to targets, communities and organizations. Economic and social conditions in the modern workplace tend to be combined to create an environment very hospitable to bullying^[1]. Academics are not immune to the bullying behaviors. Students, colleagues and administrators may all partake in or be subject to bullying^[2].

According to Hutchinson (2009), the concern over the presence of work-related violence and its impact on the wellbeing and retention of nurses continues to be a major concern in the nursing profession. Bullying is one of the frequently encountered forms of work-related violence in nursing^[3].

Workplace bullying is a serious issue affecting the nursing profession is defined as any type of repetitive abuse in which the victim of the bullying behavior suffers from verbal abuse, threats, humiliating or intimidating behaviors, or behaviors by the perpetrator that interfere with his or her job performance and are meant to place at risk the health and safety of the victim^[4,5].

Bullying is therefore not about isolated events or conflicts but rather about aggressive behavior that repeatedly over time is directed toward one or more employees by one or more perpetrators. Furthermore, the bullying appears not to be an either-or phenomenon but rather a gradually escalating process where the victim faces increasingly frequent and increasingly intense aggressive acts^[6,7].

Bullying is a form of negative interaction that can express itself in many ways, ranging from verbal aggression and excessive criticism or monitoring of work to social isolation or silent treatment. Typically, it is thus a question

of the accumulation of many 'minor' acts, amounting to a pattern of systematic maltreatment. It differs from ordinary 'conflict' since there is generally a victim-perpetrator configuration, such that the person on the receiving end feels unable to defend him or herself successfully [8].

Types of bullying are often classified in the literature as direct or indirect bullying. Direct bullying is described as physical or verbal assaults on the victim who is fairly obvious in nature, such as hitting, kicking, threats, and name-calling. Indirect bullying is aimed at damaging the victim's social status and is often much less detectable, including gossiping, spreading rumours, and convincing others to socially exclude the victim [9].

One of the main characteristics of bullying is the inequality in power between the perpetrator and the target. Either supervisors are directly involved or the bullying takes place between coworkers, where the perpetrator, for some reason or another, is stronger than the target is. Even supervisors may be bullied by subordinates, especially if the subordinates act in groups [10].

There are many possible reasons for bullying, ranging from personal antagonisms, via a bully's "need" to revenge himself on behalf of others, via social sanctions, to the situation of a manager who utilizes bullying as a management tool on an employee. The causes may thus range from a narrow conflict involving a couple of employees to those determined by organizational relationships and conditions [11].

Bullying results in serious consequences for both organizations and employees. For individuals, the consequences of bullying have been reported to include: lowered self-esteem, depression, anxiety and the physical illness. Physical symptoms reported include disturbed sleep, headaches, increased blood pressure, anorexia, gastrointestinal (GI) upset. Posttraumatic stress disorder, suicide ideation, and suicide have also been reported [12]. As a result, those bullied are reported to take increasing levels of sick leave, reduce their hours of work or leave their place of employment altogether. The negative effects on the organization are reported to include: lowered morale, increased turnover, higher sick leave levels and increased costs associated with recruitment as a result of staff turnover [13]. Workplace

bullying has negative consequences on targets' careers by limiting opportunities for advancement [14].

The lack of reporting bullying within universities and nursing education may be because these institutions do not have mechanisms to deal with bullies. There are no procedures for staff to disclose bullying experiences safely, no counseling for the bullied or disciplinary or training strategies to deal with the bully [15]. Effective strategies for preventing bullying are dependent on the quality of working environments that can be created by nurse leaders. The organizational effects on employees are influenced by the behaviors of leaders as a result of the way they manage the job context and job content [16].

The aim of this study was to assess : nursing students' perception and experience of bullying behavior in the faculty of nursing of Tanta University.

Research questions

- What are the types and frequency of bullying behaviors in nursing education reported by nursing students?
- what are the sources of bullying behaviors in nursing education and what is the frequency of bullying from these sources as reported by nursing students?
- What are the effect of bullying behaviors on nursing students
- What behaviors do nursing students report using to cope with bullying in nursing education?

2. Material and Methods 3. Results

Material

Design:

Descriptive study used a questionnaire survey design to assess bullying behaviors by nursing faculty from the nursing students' perspective at one point of time.

Setting:

The study was carried out in Faculty of Nursing, Tanta University, Egypt.

Subjects:

The students who enrolled in this study were in second, third and fourth year in Faculty of Nursing, Tanta University. The three academic years were selected because they were more contact with clinical areas and with persons in faculty. First year students were not included in the scope of the study because they have less contact with

clinical. The study was anonymous and asked respondents to take part in the study. The sample was approximately 400 students. 200 students from second year and the other 200 students were divided between third and fourth year where selected 100 students from each year. Total number of students in the college this year nearly 1000 students. Their ages ranged from 19-23 years. The study was done during the academic year 2012-2013, in April month.

Tools of the study:

A five-section survey form was used for the collection of research data.

Section I: - Socio-demographic characteristics of the students: which include the students' age, sex, marital status and residence.

Section II: - The types of bullying behaviors:

To estimate bullying at nursing faculty, we used a short version of the Negative Acts Questionnaire that adapted according to the earlier studies on bullying against nursing students particularly those conducted by Cooper et al. [17] and Celik and Bayraktar [18] some questions were changed to make the questions more applicable. The Questionnaire consists of thirteen items referring to personal related bullying (e.g., being shouted, spreading gossip, socially isolated), work related bullying (e.g., unmanageable workloads, hostility after or failure to acknowledge significant clinical or academic accomplishment), and physical intimidating forms of bullying (e.g., threats of violence or physical abuse, intimidating behavior such as finger pointing). The scale which had already been translated and validated in previous studies [18,20] and the respondents are asked how often they have been exposed to the specific behavior during the last 6 months. The response categories are "never", "sometimes happen", "frequently or always".

Section III: - The sources of bullying behaviors which include:

The staff of nursing faculty, faculty employees and also in hospital which include the physicians, nurses and patients.

Section IV: - The effects of bullying behaviors on the students which consists of fifteen items referring to the physical effects as (feeling of extreme fatigue or exhaustion, becoming forgetful, insomnia, increasing consumption of alcohol and cigarette, panic attack, damaging physical

health), psychological effects as (getting angry, losing self confidence, impossible to bear criticism, feeling guilty) and organizational effects as (thinking about leaving profession, diminishing school performance, loss of concentration, reducing motivation, dysfunction social life). The response categories are “never”, “sometimes happen”, “frequently or always”.

Section V: - The ways that the nursing students used to cope with bullying which include eleven items referring to (did nothing, put up barriers, spoke directly to the bully, pretending not to see the behavior, reported the behavior to a superior / authority, increased my use of unhealthy coping behavior, warned the bully not to do it again, shouted or snapped at the bully, demonstrated similar behavior, went to a doctor, perceived the behavior as a joke). The response categories are “never”, “sometimes happen”, “frequently or always”. More over the investigator considered three categories of behavior or coping responses, did nothing, put up barriers, pretended not to see the behavior, and perceived the behavior as a joke were considered passive responses. Reported the behavior to a superior / authority, went to a doctor, warned the bully not to do it again, and spoke directly to the bully were considered active responses. Demonstrated similar behavior shouted or snapped at the bully and increased uses of unhealthy coping behaviors were considered aggressive behaviors [18].

Method:

1. An official permission to carry out the study was obtained from responsible authorities at faculty of nursing at Tanta University
2. The purpose of the study was explained and made clear to the educators of study setting to get their co-operation and acceptance.
3. The purpose of the study was explained to the students and their verbal consent to participate was received and those who were willing to participate were given a questionnaire to complete.
4. Content validity of the tool was performed by five experts in the field of nursing. The expert panels were asked to evaluate the developing questions after translation according to

- (a) readability, (b) language appropriateness (c) ease of understanding items.
5. Pilot study was conducted on 10% from nursing students (40 students who were excluded from the study population), to identify the obstacles and problems that may be encountered in data collection.
6. Reliability of the tool was tested by using Cronbach Alpha test it was 0.80.
7. The questionnaires were distributed to nursing students (n = 400) after finishing their lecturer or lab. Before the questionnaire was administered, the subjects were thoroughly briefed about the purpose of the study and the data collection process. They were also assured of their anonymity and the confidentiality of their responses.
8. The data collection were completed during the academic year 2012-2013, in April month.
9. Responding time to all questions in the tools consumed (15-20) minute.
10. Ethical consideration: Before the research was initiated, legal permission was obtained from the dean of Faculty of Nursing. The purpose of the research was explained to the students and they were instructed about their right to refuse if they wished to do so. In addition, respondents were informed that any information that they shared would be used only for scientific purposes. No information about the identity of the volunteers was required.

Statistical Analysis

The collected data were, organized, tabulated and statistically analyzed using statistical package of social studies (SPSS) version 19. For age, range, mean and standard deviation were calculated. For other variables the number and percentages were calculated.

3. Results

Table 1: The findings on demographic characteristics of the study group are as follows; of 400 nursing students in the sample, their age ranged from 19–23 years and mean of age were 20.8 ± 52 years. The majority of students

were females (75 %), and nearly all of them were single (97.5%), more than half (62.5%) of the respondents lived in rural areas.

Table 2 this table showed types of different bullying behavior high percent of students 66% never exposure to threats of violence or physical abuse or actual abuse, high percent of students 66.8% sometimes and 19.5% frequently exposure to Being shouted at or being the target of spontaneous anger (or rage) also high percent 43% of students always exposure to behavior of Negative and disparaging remarks about nursing’s profession. 45% sometimes Assignments, task, work or rotation responsibilities made for punishment rather than educational purposes and 46% exposure to given a bad grade as a punishment.

Table (3) showed that the source of bullying behavior high percent of student exposure to be shouted at or be the target of spontaneous anger (or rage) by nurse, patients and faculty employee of faculty 48.8 %, 34.3% and 42% respectively. High percent 41.3% of student exposure to negative and disparaging remarks about nursing’s profession by physician. Also high percent 69.5 % of students exposure to be Given a bad grade as a punishment and 54.5% of student exposure to Unmanageable workloads or unrealistic deadlines by faculty staff.

Table (4) represents distribution of studied students by effects of bullying behaviors on them. Majority of students 79.3% never exposure to increasing consumption of alcohol and Cigarette, more than half of students occasionally exposure to getting angry, diminish performance, becoming forgetful, losing confidence, loss of concentration, impossible to bear confidence, panic attach, dysfunction social life, damaging physical health, and feeling guilty. Also more than half 59.8% of students

Table 1. Demographic characteristics of the studied students.

Characteristics	N =400 / percentage
Age in years	
Range	19-23
Mean	20.8 ± 52
Sex	
Male	100 (25%)
Female	300 (75%)
Marital status	
Single	390 (97.5%)
Married	10 (2.5%)
Residence	
Urban	150 (37.5%)
Rural	250 (62.5%)

frequently exposure to feel of extreme fatigue or exhaustion.

Table (5) shows coping of students to bullying behavior. High percent of students use 72.5 % and 71.3 % their response to bullying behavior were never increase of unhealthy behaviors and show similar behavior which these behaviors consider aggressive behaviors. More than half of students their coping considered passive coping responses as Did nothing, put up barriers, pretended not to see the behavior, and perceived the behavior as a joke were considered passive responses occasionally and frequently. While high percent 26.5 %, 48.5% of students frequently warn the person whose bad behavior not to do it again and complaint to a higher authority 50.7% and 10.5% respectively these behavior consider active response of the students.

4. Discussion

National and international literature reveal that the prevalence of bullying and

harassment in the health sector workplace is a well-known problem and the risk of being subjected to psychological violence among nurses is three times higher than the ones in other professional groups in the service sector^[20-21]. Also it is quoted that nursing students have the highest risk of experiencing aggression because of inexperience, frequent ward changes and the challenge of meeting new environments^[22]. Bullying in nursing has been identified as a work-based stressor that affects not only the nurse, but also the patient care the nurse provides.^[17]

The purpose of this study was to assess the nursing students' perception and experience of bullying behavior in faculty of nursing at Tanta University

In relation to types of different bullying behavior in the present study two third of students never exposure to threats of violence or physical abuse or actual abuse, while two third of students and nearly one fifth sometimes and always exposure to personal related Bullying include Being shouted at or

being the target of spontaneous anger (or rage) also less than half of students always exposure to behavior of negative and disparaging remarks about nursing's profession. also sometimes exposure to assignments, task, work or rotation responsibilities made for punishment rather than educational purposes and exposure to given a bad grade as a punishment.

This in constant with *Palaz S. 2013*,^[23] as in their finding were work related bullying (e.g., negative and disparaging remarks about nursing's profession, unmanageable workloads, assignments, task or rotation responsibilities made for punishment rather than educational purposes) was the most frequently encountered type of bullying behaviors, 34.80% in total, followed by personal related bullying (e.g., being shouted, spreading gossip, socially isolated), 23.22 % in total. On the other hand, only very small amount of respondents (only 2.43 %) reported physical intimidating forms of bullying

Table 2. Distribution of studied students by their exposures to bullying behaviors.

Exposure to bullying behaviors	Never		Occasionally		Frequently	
	N	%	N	%	N	%
Being shouted at or being the target of spontaneous anger (or rage)	55	13.8	267	66.8	78	19.5
Inappropriate, nasty, rude or hostile behavior	106	26.5	253	63.3	41	10.3
Belittling or humiliating behavior	88	22.0	212	53.0	100	25.0
Spreading of gossip and rumours about you	131	32.8	181	45.3	88	22.0
Cursing and swearing	237	59.3	122	30.5	41	10.3
Negative and disparaging remarks about nursing's profession	52	13.0	176	44.0	172	43.0
Assignments, task, work or rotation responsibilities made for punishment rather than educational purposes	117	29.3	180	45.0	103	25.8
Given a bad grade as a punishment	81	20.3	187	46.8	132	33.0
Hostility after or failure to acknowledge significant clinical, research or academic accomplishment	145	36.3	197	49.3	58	14.5
Threats of violence or physical abuse or actual abuse	264	66.0	114	28.5	22	5.5
Being ignored and excluded or socially isolated	212	53.0	158	39.5	30	7.5
Unmanageable workloads or unrealistic deadlines	96	24.0	219	54.8	85	21.3
Intimidating behavior such as finger-pointing, invasion of personal space, shoving, blocking/ barring the way	192	48.0	136	34.0	72	18.0

Table 3. Distribution of studied students by sources of bullying behaviors.

Exposure to bullying behaviors	Nurses		Physicians		Patient		Faculty staff		Faculty employees	
	N	%	N	%	N	%	N	%	N	%
1- Being shouted at or being the target of spontaneous anger (or rage)	195	48.8	135	33.8	137	34.3	190	47.5	168	42.0
2- Inappropriate, nasty, rude or hostile behavior	161	40.3	100	25.0	108	27.0	95	23.8	103	25.8
3- Belittling or humiliating behavior	111	27.8	169	42.3	86	21.5	124	31.0	88	22.0
4- Spreading of gossip and rumours about you	132	33.0	39	9.8	58	14.5	70	17.5	84	21.0
5- Cursing and swearing	81	20.3	52	13.0	127	31.8	70	17.5	68	17.0
6-Negative and disparaging remarks about nursing's profession	136	34.0	165	41.3	121	30.3	82	20.5	66	16.5
7-Assignments, task, work or rotation responsibilities made for punishment rather than educational purposes	81	20.3	58	14.5	26	6.5	220	55.0	57	14.3
8-Given a bad grade as a punishment	26	6.5	42	10.5	15	3.8	278	69.5	26	6.5
9-Hostility after or failure to acknowledge significant clinical, research or academic accomplishment	54	13.5	111	27.8	38	9.5	181	45.3	42	10.5
10-Threats of violence or physical abuse or actual abuse	49	12.3	44	11.0	76	19.0	106	26.5	56	14.0
11-Being ignored and excluded or socially isolated	59	14.8	95	23.8	68	17.0	117	29.3	49	12.3
12-Unmanageable workloads or unrealistic deadlines	60	15.0	57	14.3	35	8.8	218	54.5	69	17.3
13-Intimidating behavior such as finger-pointing, invasion of personal space, shoving, blocking/barring the way	84	21.0	83	20.8	68	17.0	135	33.8	89	22.3

(e.g., threats of violence or physical abuse, intimidating behavior such as finger pointing). Nursing students reported that work related bullying was the most annoying problem for them but this finding needs to be read carefully because it is possible that students in general do not understand assignments, workload and deadlines as a consequence of the learning environment. But the finding of this study is in contrast with *Cooper et al., 2011*^[17] The results of his study indicated the most frequent types of behaviors experienced from all sources were cursing, swearing, inappropriate, nasty, rude, or hostile behaviors, and belittling or humiliating behavior. This may due to his study carried out in different country and culture.

Regarding the source of bullying behavior, high percent of student nearly less than half exposure to being shouted at or being the target of spontaneous anger (or rage) by nurse, patients and faculty employee of faculty respectively. Nearly less than half of student exposure to Negative and disparaging remarks about nursing's profession by physician. Also more than two thirds 69.5 % of students exposure to a bad

grade as a punishment and more than half 54.5% of student exposure to unmanageable workloads or unrealistic deadlines by faculty staff. This may due to increase load on nurses, physician in the hospital and faculty employees also miscommunication between them. Moreover because it is possible that students may do not understand assignments, workload and deadlines as a consequence of the learning environment. This finding in the present study were agreement with *Celebioglu, 2010*^[21], *Celik, and Bayraktar, 2004*^[18] Turkish studies, the abusive behaviors considered were mainly those committed by patients and their relatives, and classmates. Also *Sofield and Salmond (2003)*^[24] found that primarily physicians, then patients, and patients' families were responsible for most of the verbal abuse towards nurses.

More over patient population increased workloads for nurses. Therefore, increased stress and pressure on clinical nurses might cause increased tendency of bullying student nurses in the clinical settings. Nursing students were exposed to bullying and harassment in both the practice settings and the educational settings, as suggested by *Randle (2003)*^[25].

In relation to effects of bullying behaviors on students, majority of students more than three third of them never exposure to increase consumption of alcohol and Cigarette, this due to prevalence of Islamic ethics and believes which prohibited these things, also more than half of students occasionally exposure to getting angry, diminish performance, becoming forgetful, losing confidence, loss of concentration, impossible to bear confidence, panic attack, dysfunction social life, damaging physical health, and feeling guilty. Also more than half of students in the present study frequently exposure to feel of extreme fatigue or exhaustion. This constant with the findings of *Palaz 2013*^[23] as the finding shown that nursing students who experienced bullying behaviors felt anger and lost their concentration, their social life was affected badly, and they even thought of leaving profession as a consequence.

In relation to coping of student with bullying behaviors, the majority of students use their response to bullying behavior as were never increase of unhealthy behaviors and show similar behavior which these behaviors consider

Table 4. Distribution of studied students by effects of bullying behaviors on them.

Effects of bullying behaviors	Never		Occasionally		Frequently	
	N	%	N	%	N	%
• Feeling of extreme fatigue or exhaustion	25	6.3	136	34.0	239	59.8
• Getting angry	24	6.0	204	51.0	172	43.0
• Thinking about leaving profession	98	24.4	151	37.8	151	37.8
• Diminishing school performance	62	15.5	212	53.0	126	31.5
• Becoming forgetful	34	8.5	209	52.3	157	39.3
• Losing self confidence	91	22.8	219	54.8	90	22.4
• Loss of concentration	33	8.3	235	58.8	132	33.0
• Insomnia	47	11.8	183	45.8	170	42.5
• Reducing motivation	63	15.8	183	45.8	154	38.4
• Increasing consumption of alcohol and Cigarette	317	79.3	61	15.3	22	5.4
• Impossible to bear criticism	126	31.5	209	52.3	65	16.2
• Panic attack	52	13.0	222	55.5	126	31.5
• Dysfunction social life	69	17.3	214	53.5	117	29.2
• Damaging physical health	61	15.2	203	50.8	136	34.0
• Feeling guilty	74	18.5	214	53.5	112	28.0

Table 5. Distribution of studied students according to behaviors used to cope with bullying in nursing education.

Responses to cope with bullying behaviors	Never		Occasionally		Frequently	
	N	%	N	%	N	%
• I did not do anything	117	29.2	210	52.5	73	18.3
• put barriers between me and the person's behavior owner	87	21.8	224	56.0	89	22.2
• speak directly to the person whose behavior	107	26.8	205	51.2	88	22.0
• - pretend not to see the behavior	220	55.0	161	40.3	19	4.7
• complaint to a higher authority	155	38.8	203	50.7	42	10.5
• increase my use of unhealthy behaviors	290	72.5	92	23.0	18	4.5
• warn the person whose bad behavior not to do it again	100	25.0	194	48.5	106	26.5
• shout or interrupt the person whose behavior	207	51.7	159	39.8	34	8.5
• show similar behavior	285	71.3	93	23.3	22	5.4
• go to a doctor	276	69.0	105	26.3	19	4.8
• see the behavior as a jok	155	38.8	207	51.7	38	9.5

aggressive behaviors. More than half of students their coping considered passive coping responses as did nothing, put up barriers, pretended not to see the behavior, and perceived the behavior as a joke were considered passive responses occasionally and frequently. While nearly less than half of students frequently warn the person whose bad behavior not to do it again and complaint to a higher authority. Nearly half of students their behaviors consider active response of students. This constant with *Cooper et al., 2011*^[17] as the most frequent response was "Did Nothing" followed by "Put up Barriers." This response is problematic when reports indicate hostility and violence in the workplace is on the rise. While that finding of (*Celik & Bayraktar, 2004*^[18], *O'Connell et al., 2000*^[26] and *Sofield & Salmond, 2003*^[24] reported that nurses felt unable to handle verbally abusive situations, did nothing, or engaged in unhealthy coping behaviors such as drinking or taking medications. Respondents in his study also reported an increase in the use of unhealthy coping behaviors.

Conclusion

Nursing students were exposed to bullying behaviors in the practice settings and the educational settings, High percent of student exposure to be shouted at or be the target of spontaneous anger (or rage) by nurse, patients and faculty employee of faculty. Also high percent of students exposure to behavior of negative and disparaging remarks about nursing's profession, assignments, task, work or rotation responsibilities made for punishment. Majority of students their response to bullying behavior were never increase of unhealthy behaviors.

Recommendation

- Nursing, faculty staff and managers need to be educated about bullying behaviors and how to deal with bullying.
- Encourage strategies to increase students' awareness of this problem and its potential consequences are indicated.
- Develop educational programs regarding bullying and strategies focused on skill building to help students nursing respond appropriately when they are a victim of bullying.

- Develop and implement curricula that educate nursing students on the incidence of disruptive behaviors including lateral violence and bullying, to eradicate this behavior.
- Further nursing research continue to research the contributing factors and the process of bullying behaviors.
- Promote a culture of safety that encourages open and respectful communication among all healthcare providers and staff.

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Intellectual Capital and Knowledge Assets for Value Creation

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A **bstract** In knowledge-based economy, the intellectual capital is used for value creation in the organization, and in today's world, the success of any organization depends on its ability to manage these assets. In the ultra-competitive era, organizations are facing an environment characterized by increasing complexity, mobility and globalization. Therefore, to sustain, organizations are facing new challenges and releasing these challenges requires paying more attention to development and nurturing the inner skills and abilities. This is done through the basics of intellectual capital and knowledge assets which are used by organizations to reach a better performance in the business world. Knowledge and intellectual capital are recognized as a sustainable strategy to achieve and maintain the competitive advantage of organizations. Nowadays, because of the increasing importance of knowledge and intellectual capital in corporates sustainability and the unmatched role they play in maintaining the competitive position, several studies have addressed the intellectual capital and its components from different aspects. This study first specifies the history and the definition and components of intellectual capital, and then features of all components are discussed. In addition, the importance aspects of intellectual capital, the measurement objectives, as well as methods used for classification of intellectual capital measuring are also discussed and analyzed.

K **ey Words** intellectual capital, knowledge assets, knowledge-based economy, value creation.

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I **ntroduction**

By the end of the last century, science was considered same as the information available for public, and management roles were considered finding a way to optimally combine the products and markets, as well as removing barriers for entrance of substitute products and technologies. However, in recent years, the nature of resources has changed and is now competitive. To identify the true and sustainable sources of organizations, it is therefore essential to take the inside of companies into serious consideration (*Hajiba, 2010*). Today is the era of knowledge. The emergence of the new economy based on knowledge and information has led to increased interest of researchers in the field of intellectual capital. This field that has attracted the attention of many researchers uses the intellectual capital as a tool to evaluate the value of companies (*Piotang et al., 2007*). In today's knowledge-based societies, the role and the importance of the used intellectual capital in the sustainable profitability of corporates is higher than the output of the used financial investment (*Rostami and Seraji, 2005*). Intellectual capital is a multidisciplinary concept and is different in the fields related to business and commerce (*Huang and Luther 2007*). There is little agreement on the level of our understanding about intellectual capital. Intellectual capital, however, was unknown in the past, now it plays an important role in the process of economic, managerial, technological, and social development in various forms. The resulting revolution in information technology, the growing importance of knowledge and knowledge-based economy, the changing patterns of a network society as well as the emergence of innovation, as the most important determinants of competitive advantage,

are those that enhance the importance of intellectual capital in companies more than before (*Anvari and Rostami, 2005*).

Intellectual property is the most important part in the corporate knowledge and is required to be identified and measured. Assets are very effective on determining a company's position in the international arena and determining the value of the company. Intangible assets of each company include corporate branding, corporate loyal customers, satisfied employees, creative employees, flexible and dynamic organizational culture, efficient and competent managers, a risk-tolerant environment, a good impression of the company to the customers. For example, the value of Coca-Cola's brand is several times more than the value of the total asset of the company. This group of assets plays an important role in providing a long-term competitive advantage for companies. The companies that are able to recognize their assets properly and manage them well, they will have a better performance than their competitors. In other words, the proper management of these assets play a critical role in the success of companies which work in today's competitive world. Intellectual capital is a topic that deals with the management and administration of these assets.

History and definitions of intellectual capital

The term "intellectual capital" was first introduced by *John Kenneth Galbraith (1969)*. Galbraith believed that intellectual capital is an ideological process and consists of intellectual process. Before identifying, managing and measuring the intellectual capital, we need to understand the concept it has. The concept of intellectual capital has always been ambiguous, and different definitions have been used for the interpretation of this concept. Many tend to use terms like assets, resources or operation incentives rather than "capital", and replace the term "intellectual" by words like intangible, knowledgebased or non-financial. Some professions (finance accounting, and legal professions) have also proposed different definitions such as "non-financial fixed assets" which has no objective and physical entities. According to what was discussed, there are different definitions for intellectual capital some of which are mentioned at the following:

1. Stewart believes that intellectual

capital is a set of organizational knowledge, information, intellectual property, experience, competence and learning that can be used to create wealth. In fact, the intellectual capital includes all employees, organizational knowledge and skills for creating the added value and lead to sustained competitive advantage.

2. Bontis defines intellectual capital as a set of intangible assets (resources, capabilities, competition) which are achieved through organizational performance and value creation.
3. Edvinsson and Malone define intellectual capital as the information and knowledge applied to the work to create value.
4. Bontis and Holland, in their article in 2002, defined intellectual capital as follows: "intellectual capital shows the reserve of knowledge available in a certain time in an organization". This definition focuses on the relationship between intellectual capital and organizational learning.
5. Brooking describes intellectual capital as a combination of all the intangible assets that empower the company in works and operations.
6. According to Skandia, intellectual capital encompasses knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a competitive cut in the market for Skandia.
7. Recently, researchers have suggested a general definition for intellectual capital which also defines the requirements for recognition of this asset: "Intellectual capital is a type of property that measures the ability of the enterprise to create wealth. This asset lacks an objective and physical nature and is an intangible asset which is achieved through utilizing assets related to human resources, organizational performance and relationships outside the enterprise. All these features create values within organizations and because the earned value is a completely internal happening, it is not merchantable" (*Rass and Baroness, 2005*).

Although it seems that these definitions consider different approaches for intellectual capital, shared elements are observed among them. Intellectual capital includes intangible resources. These intangible resources form a series of linkage relationships, and knowledge assets should consider evaluation and measurement issues by linking

the elements of intellectual capital. Reporting intellectual capital must also face the specific challenge that it is not always possible to protect the proprietary rights governing these resources in an organization. For example, there are proprietary rights for the trademarks; however, these rights are not true about the organizational culture of the institution and the skills of staff while these intellectual capital help to create the value. The implicit and general aspect of intellectual capital is in the heart of the major problems faced by the reporting of intellectual capital.

Factors limiting the ability of intellectual capital to create value

1. Limited barriers: lack of physical nature for intangible resources makes it hard to create barriers for competitors in accessing these assets. Although passing laws on the protection of patent rights in recent decades has largely reduced this problem but it is not fully guaranteed.
2. Inherent risk: to provide intangible resources, a large initial investment is required in comparison with tangible resources. Increasingly rapid changes in factors considered by the market as well as technologies cause barriers for management while assessing modern innovations and since changes are tremendous, expanding intangible resources is highly riskier than tangible resources.

Characteristics of Intellectual Capital

Despite the apparent similarities between intellectual capital and tangible assets in the potential to generate future cash flows, there are some characteristics that differentiate the intellectual capital from these assets, which are as follows:

1. Intellectual properties are non-competitive financial assets. Unlike physical assets that only can be used to do a certain job at a certain time, intellectual property can be used simultaneously for several particular tasks. For example, a customer support system can support thousands of customers at a time. This ability is one of the most important measures for the superiority of intellectual assets on physical assets.
2. Human capital and relational capital cannot be personal properties, but must be shared between employees, customers, and suppliers. Therefore,

the development of this type of property requires care and attention.

Intellectual capital vs. non-tangible assets

Terms “intellectual capital” and “non-tangible assets” are often used interchangeably. The extent and the scope of this concept are basically different. While intellectual capital includes all sources of knowledgebased intangible assets, non-tangible assets are defined as intangible and financial assets which are identifiable by a non-physical nature. An (intangibles) asset is a resource which is controlled by the institution as a result of the past events (such as internal purchase or production) and is expected that to create future economic benefits (cash flows of other assets). In this concept, an intangible asset has the following features:

1. It should be based on the definitions of recognition and detection.
2. It should be under the protection of the law.
3. It should be under private ownership and the private ownership should be legally transferable.
4. There should be a visible evidence for the existence of an intangible asset.
5. It should be created at an identifiable time or as the result of an identifiable event.
6. It should be end at an identified time or as a result of an identifiable event.

Obviously, only a small part of the intellectual capital meets these requirements. Royalties and trademarks are examples of assets that significantly meet these conditional standards. However, most capital assets are not so. No one can recognize the particular point of time when the customer loyalty is created, the innovative spirit of in an ended organization, or the transfer of an employee education, information and technology. In addition, it is often difficult to link an intellectual capital, such as a hierarchical structure or a mission, to visible improvements in the production of goods and services, or improvements in usefulness. These are some main reasons for why there is no pricing formula for capital asset.

The importance of intellectual capital

The global shift in the economy from the manufacturing sector to the economy based on intangible resources and the service sector has increased the attentions to knowledge and intellectual capital and its effect on the firm performance, and the relationship between financial returns and corporate performance is highly

regarded in emerging and developing economies. The relationship between intellectual capital and corporate performance has been experimentally studied in many countries including America, Canada, China, Malaysia, Germany, etc. Terms “intangible”, “knowledge assets” and “intellectual capital” are widely used on accounting, economics and management literature; however, the potential value and the future benefits they have are not reliably measurable. In general, the productivity of companies depends on the intellectual capital and the organization capabilities in using them as an asset. Stewart points out that a major revolution has occurred in information and knowledge based economy era, so that the working asset is replaced by information and physical assets are replaced by intellectual capital. In fact, the physical and material benefits are greatly replaced by the knowledge and communication as the main sources of value and wealth, and in the new era, the new economy is emerging in the form of intangible economy. The digital revolution in the economy caused the rise of new concepts including the meta-material economy, the weightless economy, and the software economy. These concepts states that the driving factor of the economy is not anymore a material, but it is a weightless and immaterial thing like information and knowledge.

In the strategic management literature, many researches have been conducted on the company's resources and sustained competitive advantage. Intellectual capital includes non-physical resources, the values associated with manpower capabilities, organizational resources, operational processes, and connection with the stakeholders. In today's organizational conditions, considering the knowledge and the skills of manpower, communications and organizational culture is the most important factor for competitive advantage and firm performance.

Efficient and effective management of companies always requires the proper tools and techniques to understand the contemporary management issues. Today, the economy and the standards of value creation have changed, and intangible resources and intellectual capital are new leverage to deal with the environmental and structure changes. Business performance increasingly requires a management active in intellectual capital and intangible resources contexts to achieve sustainable returns for

shareholder.

However, a feature of knowledge-based economy is considerable investment in human capital and information technology. However, the current reporting system, investors have no accurate understanding about the true value of the company and its future.

Losses that will be imposed into capital markets, if the information in this type of investment is not disclosed, suggest the importance of intellectual capital. Examples of these losses are:

1. The minor the shareholders may have no access to information related to intangible assets in private meetings held with major shareholders.
2. If managers use information derived from internal decisions regarding intangible assets without informing other investors, the probability of happening a bargain according to confidential information is increased.
3. The risk of improper valuation of companies is increased and this makes bankers and investors to consider a higher risk level for organizations.
4. The cost of capital increases. In case of the disclosure of such information, due to the less uncertainty regarding the future outlook for the organization, the company will be valued more accurately and capital costs can be reduced.

The elements of intellectual capital and knowledge assets

In general, researchers and those involved in the field of intellectual capital agree that the intellectual capital is made up three elements including human capital, structural capital and relational capital, which are explained as follows:

1. Human Capital: *Rass et al. (1997)* argue that employees create intellectual capital through their intellectual competence, attitude and agility. The most important elements of human capital are the workforce skills, and depth and extent of their experience. Human resources can be regarded as the spirit and the mind of intellectual capital. This type of capital, at the end of the working day, quits the company when employees leave the company the, but structural capital and relational capital remain unchanged even when the organization is left. Human capital includes:
 - a) Skills and competencies of the workforce;
 - b) Knowledge of the workforce on subjects that are important for the

success of the organization; and

c) Talents, ethics, and behavior of the workforce. Broking believes that the human assets of an organization include skills, expertise, abilities to solve problem, and leadership styles. The high level of staff turnover in an organization may mean that the organization has lost this important component of intellectual capital.

2. Relational Capital: relational capital includes all relationships between the organization and any individual or other organization. These individuals and organizations can include customers, agents, employees, suppliers, regulatory authorities, communities, creditors, investors, etc. The relationships are divided into two categories according to their purpose :

The first category includes those relationships which are formal through contracts and commitments with customers and suppliers, or main partners; and the second one mostly includes informal relationships.

Bentis states that the new definitions have extended the previously existed concept of customer asset to relational asset which include the knowledge in the relations that the organization has developed with customers, competitors, suppliers, commercial associations, and the government.

Customer capital is considered as a bridge organizing the operation of intellectual capital and is a determinant for converting the intellectual capital to market value. This capital includes the strength and the loyalty of customers and relations. Customer capital indicators include market share, customers retaining, and the profit earned from each customer. Customer capital, among all types of intangible assets, is probably worst managed. Many business owners do not even know who their customers are.

3. Structural Capital: structural capital is the knowledge available in the organization. This asset belongs to the whole company and it can be recreated and traded with others. Rass et al. believe that the structural capital includes all non-human resources in the organization including databases, organizational charts, operating instructions for processes, strategies, implementation plans, and generally whatever has a meta-material value for the organization. Due to the diversity of structural capital

components, it is usually decomposed to organizational, process, and innovation capital.

Organizational capital includes systems that are used to empower and lever the capabilities of the organization. The process capital involves techniques, procedures, and programs used to improve the transportation of goods and services. Innovation capital includes intellectual and intangible properties. Intellectual properties are preserved trade rights such as copyrights and trademarks. Intangible properties are other talents by which the organization operates. Structural capital covers a wide range of essential elements the most important of which often includes:

1. Key executive processes;
2. The structuring approach;
3. Politics, information flows, and databases;
4. Leadership and management styles;
5. Organizational culture;
6. Plans for rewarding employees.

Structural capital can be divided to subsets including culture, operations and work habits, and intellectual property.

Objectives of measuring the intellectual capital

Investigating more than 700 papers in the field of intellectual capital measurement, *Marr et al. (2003)* showed that there are five general objectives for measuring intellectual capital which are stated at the following:

1. To assist organizations to formulate strategies ;
2. To evaluate the implementation of strategies ;
3. To help the expansion and diversifying the company's decision-making ;
4. Non-financial measures of intellectual capital can be linked to repayment and rewarding plans of managers;
5. To build a relationships with outside shareholders who hold intellectual capital.

The three first objectives are related to internal decisions they aim to maximize the company's operational performance in order to make revenue by the minimum cost and to continuously improve the relationships with customers and suppliers, and market share. The fourth item is related to executive incentives and the fifth one implies on making motivates for stakeholders outside the organization. Various studies have shown that the measurement of intellectual capital is necessary and

beneficial for having both internal effective governance and successful relationships with people outside the organization. It is clear that if the initial objective of profit companies is the effective and efficient management of future cash flows, the management of final stimulus for cash flows, i.e. intangible assets, will be critical for these companies. Because how you want to manage what you cannot measure? Because of this, measuring intellectual capital and in general intangible assets is critical.

Endrisson (2002) also considers enhancement of internal management, improvement of external reporting, legal and trading incentives as the reasons of measuring intellectual capital. There are several methods to measure intellectual capital which are discussed at the following:

Classification of methods for measuring intellectual capital

In a general classification, the measurement techniques for intellectual capital are divided into four general categories.

First category: direct intellectual capital techniques

These techniques evaluate the monetary value of intellectual assets via the various components of such assets. Among the mentioned techniques, technology agent, accounting and human resource costing, value finder, direct intellectual capital and human resources accounting are located in this category.

Second category: market investment techniques

These techniques are based on the calculation of the difference between the market value for the company's stock and the capital in the hands of its shareholders and considering the difference as intangible asset or intellectual capital. Between all the 14 techniques, the invisible balance sheet model, the market to book ratio and Tobin's Q are in this category.

Third category: return on assets techniques

These techniques compute the average pre-tax income of the company for a specified period and divide the obtained value to the average value of the physical assets in the same period. The economic added value and intangible values are calculated using this procedure and belong to this class.

Fourth category: the scorecard techniques

In these techniques, various components of intangible assets or

intellectual capital are identified and either the indicators prepared in scorecards are reported for them or they are shown in the diagrams. Balanced scorecard, Scandia navigator, intangible asset control, value chain score results belong to this class.

Conclusions

Intellectual capital is defined as knowledgebased assets that create financial values in the organization, but are not listed in financial statements. The intangible nature of these assets and their absence in financial statements increase the importance of these assets, and their identification and measurement. However, the organization must manage all categories and the human capital systems, because having access to organizational goals is possible only through the process of activities of human capitals. Therefore, it was noted that different types of human capital need different human resource systems, and applying one system for all will decrease the productivity. In addition, organizations should consider other types of knowledge such as social capital and organizational capital. Therefore, it is required for researchers to conduct studies on how to combine different types of knowledge (human, social and organizational) to achieve competitive advantage. In the new economy, organizations compete in a complex and dynamic environment where the uniqueness and knowledge value creation in the organization causes competitive strategies. Since in recent years, as a consequence of privatization policies, some service organizations in the country have been or are being privatized, measuring the effect of intellectual capital on organizational performance in the sector, the efficiency of such policies can also be evaluated.

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The Study of the Relationship between Coping Strategies and Thought Control Strategies with Mental Health of Parents Having Mental Retarded Children Compared with those Having Normal Children

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ABSTRACT

The present study is aimed to study the relation between coping strategies, thought control strategies with mental health of parents having mental retarded children and those having normal children. Research methodology is correlative and 180 parents of normal children and 180 parents of mental retarded children were selected randomly as the sample. In order to collect data, Lazarous's questionnaire of coping strategies, Lezodavis's questionnaire of thought control strategies and general health questionnaire were used. T independent test, Pearson correlation coefficient and regression test have been used for data analysis. Results showed that there is a negative significant relation between thought control strategies and mental health of parents having mental retarded children and there is a direct relation between coping strategies and mental health. Results also showed that there is a significant difference in using coping strategies between parents having mental retarded children and those having normal children. They also showed that parents having mental retarded children are less mentally healthy compared those having normal children.

Key Words

coping strategies, thought control strategies, mental health, mental retarded.

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Introduction

Regarding problems their children face, parents having mental retarded children are subjected to many mental disorders, social abnormalities and interpersonal relations. A family with a mental retarded child influences on parental, marital, sisterhood and brotherhood systems and even on systems outside the family such as friends, neighbors, school and servicing institutions and imposes more pressure on inside the system, compromises the strength and consistency of inside the system and increases probability of disturbance in the system and causes stress in family micro systems. These effects influence on the mental retarded child too (Afrooz, 2003). Parents of mental retarded children use different strategies while facing problems. They use coping strategies in different situations. Coping strategies mean a set of cognitive and behavioral attempts of an individual that are used in a stressed condition and result in decrease in its difficulty (Dadsetan 1997). Coping is a permanent change in behavioral and cognitive attempts in order to control internal and external needs that are stressed and beyond personal sources (Lazarous, 1994). Thought control strategies mean a method for controlling unwanted and undesirable thoughts (Kaviani, 2001). Strategies people use to cope with disturbing thoughts are divided into five classes: punishment, reassessment, social control, anxiety, inattentiveness

(Welz, 1994). By studying thought control strategies and mental health of parents having mental retarded children, some approaches can be suggested for controlling undesirable and disturbing thoughts and we can help their mental health recovery. Health is one of the vital requirements of human which plays a critical role in sustainable development. In addition of physical health, human being has paid attention to other aspects of health including mental health. The concept of mental health includes internal feeling of goodness and self confidence, self reliance, competitive capacity, intergenerative dependence and self flourishing of potential emotional and thoughtful abilities (Shahmohammadi, 2001).

In the study called the relation between coping strategies and mental health of mothers of autistic children, Afshari.et.al (2006) showed that mothers having autism children had mental symptoms. It was also found that here was no significant relation between coping strategies focused on problem solving and emotion with mental health. But there was a relation between ineffective coping strategies and mental health. In a study so called effect of stress evaluation and encountering strategies with mental health, Mosavi nasab and Taqavi concluded that initial evaluation of stress explains amount of variance in encountering strategies. Evaluation of stress and encountering strategies explains amount of variance

in mental health. Ward and Bryant studied thought control strategies on acute mental pressure disorder. Results showed that participants with acute disorder use punishment and anxiety more than normal people. It was also found that normal people had used inattentiveness more than social control and reassessment. Amir& Kashman & Foa have studied thought control strategies in patients with obsessive compulsive disorder and compared them with normal people. Results showed that people with obsessive compulsive disorder used anxiety, punishment, reassessment and social control in order to control disturbing thoughts compared the second group whereas healthy people applied absent-mindedness since parents of mental retarded children have cognitive problems; it is possible that it affect their family life and consistency. This study is dealt with coping strategies, thought strategies and mental health in parents of mental retarded children and comparing them with parents of normal children in order to identify, control and improve strategies used by parents of mental retarded children by which their mental health can be promoted so following hypotheses have been studied.

1. There is a relation between coping strategies and thought control strategies with mental health of parents having mental retarded children.
2. There is a relation between coping strategies and mental health of

parents having mental retarded children.

3. There is a relation between thought control strategies and mental health of parents having mental retarded children.
4. There is a difference between coping strategies of parents having mental retarded children and habit.
5. There is a difference between mental health of parents having mental retarded children and normal children

Methodology

It is a correlative research. The aim of correlative research method is to study range of one or more variables with range of other variables (Delavari, 2005). Statistical population of this study is all parents of normal and mental retarded children. 180 parents of normal children and 180 parents of mental retarded children were selected randomly as the sample. Tools of gathering data include three questionnaires such as

A: thought control questionnaire developed by Welzodavis in 1994. It was used for evaluation of personal differences in using strategies for controlling undesirable and unwanted thoughts. It includes 5 scales: 1- inattentiveness 2- social control 3- anxiety 4- punishment 5- reassessment

B: General health questionnaire was developed by Goldberg and Williams in 1998 and is practical for

Table 1. Correlation coefficient of the thought control, coping strategies and mental health variables.

Variables	correlation coefficient r	Significance level
Coping and thought strategies	.142	.123
Coping strategy and mental health	.056	.0001
Thought strategy and mental health	.566	.0001

Table 2. Regression analysis of thought control, coping strategies and mental health variables.

Variable	Beta	R square	F	Sig
Thought control strategy	.473	.325	.325	.0001
Coping strategy	.123			0.0001

Table 3. Pearson correlation for coping strategy and mental health of parents having mental retarded children.

Variables	Correlation coefficient	Sig
Coping strategy	.34	.0001
Mental health		

Table 4. Pearson correlation for thought control strategy and mental health of parents having mental retarded.

Variables	Correlation coefficient	Sig
Thought control strategy Mental health	- .56	.0001

Table 5. Independent T for coping strategies of parents having normal and mental retarded children.

Variables	Parents	Mean	Standard deviation	T	df	Sig
Coping strategy	Normal	53	12	2.56	358	.0001
Coping strategy	Mental retarded	81	15			

Table 6. Independent for mental health of parents having normal and mental retarded children.

Variables	Parents	Mean	Standard deviation	T	df	Sig
Coping strategy	Normal	38	13	2.80	358	.0001
Coping strategy	Mental retarded	58				

adults and adolescents. C: Lazarous coping strategy questionnaire has been developed by Lazarous and Flakman in 1985 and a wide range of thoughts and activities people do while facing internal and external stressed condition will be evaluated by this questionnaire. T independent test, Pearson correlation coefficient and regression test have been used for data analyses.

Findings:

Hypothesis 1: There is a relation between coping strategies and thought control strategies with mental health of parents having mental retarded children.

Results of table 1 showed that there is no relation between coping strategies and thought control strategies. Results also showed that there is a significant correlation between coping strategies and mental health ($r = 0.056$) and there is a positive significant correlation between thought control strategy and mental health (.566). results of regression analysis in table 2 showed that variables of thought control strategy and coping strategy can determine and predict changes related to mental health (R square= 0.320, $F= 28.16$, $Sig= 0.0001$).

Hypothesis 2: There is a relation between coping strategies and mental health of parents having mental retarded children.

Results of Pearson correlation test in table 3 showed that there is a significant relation between coping strategy and mental health of parents having mental retarded children. The correlation is equal

to - .34 and significance level is equal to 0.0001 so there is a correlation between coping strategy and mental health by .99 confidence levels. This hypothesis is accepted.

Hypothesis 3: There is a relation between thought control strategies and mental health of parents having mental retarded children.

Results of Pearson correlation test show that there is negative significant relation between thought control strategy and mental health of parents having mental retarded children. Correlative value is equal to - .56 and significance level is equal to 0.0001. So this hypothesis is accepted.

Hypothesis 4: there is a difference between coping strategies of parents having mental retarded children and habit.

Results of independent T in mean comparisons show that there is a significant difference between parents having normal and mental retarded children regarding their mental health. Amount of mental health of parents having mental retarded children is 58 and amount of mental health of those having normal children is 38. This difference is significant ($T=2.80$) and ($Sig= 0.0001$). So this hypothesis is accepted.

Hypothesis 5: There is a difference between mental health of parents having mental retarded children and normal children.

Discussion

Hypothesis 1: There is a relation

between coping strategies and thought control strategies with mental health of parents having mental retarded children.

Test results showed that there is no relation between coping strategy and thought control strategy but there is a positive significant correlation between coping strategy and mental health and between thought control strategy and mental health. Results of regression analysis showed that variables of coping strategy and thought control strategy explicate mental health. Results of this study are consistent with those obtained from Mosavinasab and Taqavi's study entitled as effect of stress evaluation and encountering strategy with mental health. The study of Goodarzi and Moeeni entitled as the relationship between coping strategies and mental health is consistent with results of this research. Their results showed that logical and problematic coping strategies could predict healthy indices and emotional and inefficient coping strategies of disease indices. So it can be concluded that cognitive problems, the strategy they have for controlling unwanted thoughts and attitudes of parents having mental retarded children can affect their mental health and positive or negative coping strategies have been used (Alice, 2003).

Hypothesis 2: There is a relation between coping strategies and mental health of parents having mental retarded children.

Results of the hypothesis showed that there is a significant correlation between coping strategy and mental health. Role of coping strategy on

mental and physical health is of great importance in health psychology. Considering the relation between mental health and coping strategies, it can be said that In a mutual interaction, mental health is accounted for results of selecting and using effective coping strategies proportional to change and stress in one hand and on the other hand, it is a bed for a healthy mental space by which effective and correct cognition is possible. According to Folkman and Lazarous's model, cognitive skills will be used for problem solving in coping process. A person use cognitive skills for solving problem using efficient coping strategy so problematic coping methods will be studied directly and psychological satisfaction will be obtained by finding appropriate solutions.

Hypothesis 3: There is a relation between thought control strategies and mental health of parents having mental retarded children.

Results of the hypothesis showed that there is a negative significant relation between thought control strategies and mental health. Thought control strategies mean those which are used by people for controlling undesirable and unwanted thoughts. *Alice (2003)* believed that some people have irrational beliefs that are effective on their interpretation of events and resulted in inappropriate emotional responses. Back believed that when a person represses negative thoughts, they feel unable to cope with these thoughts. These thoughts make a self beaten cycle automatically so that the person feels unable to cope with events and these make them anxious (*Boon, 2002*). So it can be concluded that individual way of thought about different events cause problems in cognitive balance resulting in mental imbalance in individuals.

Hypothesis 4: there is a difference between coping strategies of parents having mental retarded children and habit.

Results showed that there is significant difference in using coping strategies between parents of normal and mental retarded children. The research results are harmonious with those obtained by Dastjerdi. Results revealed

that there is a significant difference between mental retarded and normal groups regarding emotional oriented coping strategies but there was no significant difference between above mentioned groups in using inefficient and problematic coping strategies in stressed condition. In analyzing obtained results, it seems that although parents cope with activities related directly to the children, and economical costs and social pressures are stressful for them, it is possible that they could understand that using coping strategies they can solve problems while facing them and since parents of mental retarded children are under emotional and mental pressures, they may use different methods in coping strategies.

Hypothesis 5: There is a difference between mental health of parents having mental retarded children and normal children. Results revealed that there is a difference between mental health of parents having mental retarded children and normal children. Research results are harmonious with those obtained by Rimani who concluded that parents of mental retarded children experience more mental pressure. They also are consistent with results of Narimani.et.al entitled as comparing mental health of parents having mental retarded children with mental health of normal children. Results obtained from this research showed that generally, there is a significant difference between mental health of parents having mental retarded children and normal ones. Parents feel confident who hope that their children are natural and healthy but they will be disappointed when they know about disability of their children and the problem will start and it causes their mental health to reduce.

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State Autonomy, Nationality Question and Self-Determination in India—Response of the State

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ABSTRACT

The paper begins with the contemporary discourse on state autonomy and self-determination of nationalities in India and seeks to examine the response of the Indian state to these issues which have not only generated tensions between the Union and the states, but also between the State and the emerging nationalities with far-reaching implications for the authority and legitimacy of the Indian State.

Key Words

state autonomy, nationality question, self-determination, India.

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Conceptual Framework

The key concepts in this paper are 'state autonomy', 'self-determination' and 'nationality'. This section will, therefore, make an attempt at conceptualizing the aforesaid terms. As far as the concept of 'nationality' is concerned, it may be observed that although 'nationality' is commonly understood as a derivative of 'nation', it can describe a different phenomenon. In Central Europe, the difference between the words 'national' and 'nationality' developed into a very significant distinction, viz., between the 'nation-state' on the one hand and the 'state of nationalities' on the other. The first stood for one-nation state and the second for multi-national state. This became a hotly debated issue between the leading nation and national minorities in the successor states of the Austro-Hungarian and Ottoman Empires.

The official terminology in the communist states has interpreted 'nation' as the majority ethnic group in a state and 'nationality' as an ethnic minority in that state. A similar distinction has also been suggested by E.K. Francis, a sociologist who considers 'nation' as the dominant ethnic in the state. He regards 'nationality' as an imperfect nation, i.e., an ethnic minority which as a community has acquired some acknowledgement, in the form of an autonomous or protected status, in a state of another nation. If several nationalities within a state reach more or less equal footing, Francis describes the state as 'multi-ethnic nation-state' ^[1] In other words, Francis seeks to identify a nation, in one way or the other, with a state. This does not really clarify the terms. Nevertheless, in the context of this paper, the term 'nationality' will be understood

as a minority ethnic group which asserts its rights through political action and political mobilisation.

According to the doctrine of national self-determination, all people of one nationality are entitled to dwell together in order to govern themselves in a state of their own. Yet this doctrine was difficult to apply primarily because it provided no clear basis for defining the territorial limits of a particular nationality. There are conflicting definitions and legal criteria for determining which groups may legitimately claim the right to self-determination. Generally, however, 'self-determination' has come to mean the free choice of one's own acts without external compulsions. This paper views self-determination as reflecting the desire of a nationality to determine its own destiny and to have a say in its own affairs. Self-determination, therefore, is an urge for an autonomous status, either within or outside a sovereign entity. The Communist Party of erstwhile Soviet Russia adopted a resolution on the national question according to which the right of all the nations forming part of Russia freely to secede and form independent states must be recognised. To deny them this right, or to fail to take measures guaranteeing its practical realisation, is equivalent to supporting a policy of seizure or annexation. Only the recognition by the proletariat of the right of nations to secede can ensure complete solidarity among the workers of the various nations and help to bring the nations closer together on truly democratic lines ^[2]. Thus, the Communist Party endorsed the right of secession as an essential element of national self-determination. In recent times, it is alleged by many national

governments and centrist forces that any demand for self-determination is actually a prelude for secession and declaration of sovereignty. Responses of the Government of India to self-determination movements launched by Kashmiris and other smaller nationalities in northeast India, response of the Pakistan Government to similar demands in Baluchistan and the reaction of the former Soviet Government to demands of peripheral communities like Chechens are cases in point. This paper argues, however, that although the urge for self-determination may eventually culminate in a demand for sovereignty if a particular nationality does not foresee the possibility of fulfilling its aspirations and interests within the existing territorial and political framework, such a position is usually taken by radical or extremist elements only.

Another key concept of this paper is 'state autonomy'. This may be understood with reference to demands of the units of a federation for autonomy within the parameters of a federal constitution and opposition to centripetal forces. The issue of state autonomy acquires significance in view of the fact that India has been constitutionally designated as a 'Union of States', reflecting the essentially centripetal bias of the Indian federation. Considering the historical circumstances under which the federation was born, the framers of the Constitution were primarily driven by the concern to safeguard the federation from disintegrating forces and hence preferred the term 'Indian Union'. Thus, the Constituent Assembly, after prolonged debates, settled for "unitary federalism" in the backdrop of the challenges confronting the just emerged independent nation. Lawrence Saez observes that the passing of the India Independence Act and the eventual partition of India led the Constituent Assembly to adopt a more unitary version of federalism. It is in this context that the framers accorded a lot of emphasis on the fundamental unity of the Indian state and therefore envisaged a greater role for the federal government at the Centre. It was because of this compulsion that maximum number of subjects was incorporated in the Union list and the residuary powers were also

vested in the Union Parliament, thereby allowing the centripetal forces to gain precedence over the centrifugal forces. It is interesting to note that Ronald L. Watts, a renowned scholar of federalism, defends the Indian approach by arguing that in some cases, where territorial social diversity and fragmentation is strong, it has been considered desirable, as in Canada, India and Spain, to give the federal government sufficiently strong, and even overriding powers to resist possible tendencies to balkanization^[3].

Sate Autonomy and the Indian State

Keeping in view the historical reality of diversity and uneven development in India, it has been rightly argued by some scholars that the most legitimate and democratic mode of shaping the new state should have been by seeking a voluntary accession of the various regional, linguistic, tribal and other communities to the Indian Union^[4]. In the absence of such a democratic consensus, the legitimacy of the newly created Indian state was questioned in certain parts of the country^[5]. In the face of this challenge, the rulers of the new state needed a centralised administration to tackle the conflicts arising out of such challenge and sought to impose a unifying ideology of 'national integration' under which it could homogenise the people. Thus, it appears that the Indian State, instead of responding to demands for state autonomy, with sensitivity to regional and cultural aspirations, has been trying to contain these demands through coercive measures. In this context, it may be pertinent to refer to Paul R. Brass who notes that a tendency in the literature on political development and modernisation of late has been to focus upon 'national integration' as a process of state building and to treat all other loyalties except those to the state as 'parochial' and 'primordial' loyalties divisive in their impact and detrimental to national integration^[6]. This approach seems to find its echo in the 'melting pot' theory which equates the concept of the 'state' with that of the 'nation'. It may be pointed out in this context that authoritarian political leaders have come out with the argument that even regimes with competitive political

parties are dangerous threats to national unity and national integration in multi-ethnic societies because the parties tend to reflect ethnic differences. Such an attitude aims at imposing homogeneity on essentially heterogeneous multi-ethnic societies and embarks on forced integration generating perennial socio-political tensions in these societies. The tendency noted by Brass can be clearly discerned in the Indian context as well.

It may be noted that in India, an uneven distribution of powers between the Union and the units of the federation has evoked sharp reactions from states which have been clamouring for more autonomy. Broadly, the specific grievances of states against the Centre has been on issues like law and order, regulation and control over trade and industries, encroachment on state autonomy even with regard to items in the state list, excessive financial control of the Centre over the states, misuse of Article 356 and the role of the Governor in this regard and so on. The states denounced the arbitrary deployment of paramilitary troops in the states without prior consultation with governments in spite of the fact that law and order is a state subject. However, the Union Government maintained that it had the unfettered right of stationing not only the CRP and BSF units but also the units of the armed forces in aid of the civil power. The states also resented that the Centre had monopolised the control of industries, trade, commerce and production and distribution of goods. They argued that even though these were items in the state list, the Centre had brought them under its own control by taking advantage of the constitutional provision that Parliament could regulate them in national interest.

Regarding financial control of the Centre over the states, it was pointed out that the Planning Commission which is not a statutory body had become a "super government" and that through financial control; it had made the states subservient to the Centre. It was, therefore, argued that the Planning Commission should be made an independent autonomous body and should not merely be a wing of the Central government. Another major issue in Centre-State relations has been the promulgation of Presidential Rule

in the states and the role played by the Governors in this regard. It was often alleged that the Governors were acting at the behest of the Centre. Many of these issues became grounds for confrontation between the Union and the States and as a result, the demand for setting up a Commission to go into the entire gamut of Union-State relations gained ground. This eventually led to the appointment of the Sarkaria Commission in 1983 to review Centre-State relations.

The issue of State autonomy again came to the centre of the political stage in India in 2000 when the 'Autonomy Resolution' of the Jammu and Kashmir Assembly had triggered a national debate on the issue of greater autonomy for the other states of India with wide ranging political implications. An immediate response has been the reiteration of the demand for greater autonomy by regional parties in different parts of the country, viz., the DMK, the Akali Dal, the Asom Gana Parishad and so on.

Actually, the autonomy debate centres around the basic issue of the making of the India State. It may be recalled that the Constitution of India which is being quoted by both the proponents and opponents of autonomy was prepared by a Constituent Assembly which was not a fully representative body in the sense that it was not elected on the basis of universal franchise. It is significant to note that at the time of independence, only the Communist Party of India spoke about seeking a democratic mandate from the people about the future shape of the India Union. In 1945, the CPI announced an "Indian Freedom Plan" which envisaged the transfer of power to a 'real All India Constituent Assembly' elected by 17 "Sovereign National Constituent Assemblies based on the natural homelands of various Indian people"^[7].

In the context of the above discussion, the question arises— What is meant by the concept of 'greater autonomy' being talked about in the political circles of India? While greater autonomy in the context of Jammu and Kashmir implies a return to the pre-1953 status of the state^[8], this may be understood with reference to the complaints and grievances of States in the rest of the country against

centripetal tendencies leading to erosion of state autonomy. It is interesting to note the divergent reactions evoked by the recommendations of the Sarkaria commission which sought to rectify the federal imbalances. On the one hand, most regional parties and some national parties, particularly on the left, welcomed the recommendation of greater autonomy to the States. On the other hand, some scholars were of the opinion that the Commission had not only tried to distort, mislead and misinterpret the Constitutional framework, but had also opened the floodgates that would accelerate the process of disintegration of the country^[9]. It may be argued, however, that autonomy to the states within the parameters of the Constitution need not be construed as a threat to integration.

Nationality Question in India and Demands for Self-Determination

Various cultural and ethnic communities inhabiting India have their own distinctive cultures and traditions which make them assert their identity as separate nationalities. However, such assertion of identity by smaller nationalities need not be regarded as a threat to the Indian State because it is possible to accept the existence of more than one nationality within a state without either expecting them to assimilate with the dominant nationality of the state concerned or suspecting them as secessionist and leading to the disintegration of the present state^[10]. This approach distinguishes between the state and the nation, but most national parties in India do not make this distinction. These parties have often raised the bogey of nationalism to suppress legitimate demands for self-determination and autonomy. It will be pertinent here to examine the stand taken by the Congress Party which has ruled the Indian State longer than any other national party and considers any challenge to the state authority at the Centre as an attack on the very existence of the nation-state.

Since its inception, the Congress had been professing the unity of India as its ultimate goal. This implied, according to Kousar J. Azam, an incorporation of divergence within the pattern of

unity, for, without a convergence of the divergence towards the goals of freedom, there could be no unity^[11]. In his first presidential address, W.C. Bonnerjee gave a call for unity. He emphasised that the first task before the Congress was "the eradication, by direct friendly intercourse of all possible racial, creedal or provincial prejudices among all lovers of our country and the fuller development and consolidation of ... sentiments of national unity"^[12]. But the Congress conception of national unity embracing racial, cultural and regional diversities under its own umbrella appears to be an unattainable ideal as different ethnic and regional groups in India have sought to preserve their distinct identities by putting up strong resistance against the forced assimilation process. Such assertions of the smaller nationalities to protect their identity have come to be viewed as major threats to the state of India although prevalence of this phenomenon during the British period led the Indian National Congress to resort to linguistic reorganisation which helped it to derive support from different regions^[13]. There was, however, a change in the attitude in the Congress Party in the post-independence period and this became clear in the J.V.P. Committee (1949) report which viewed linguistic reorganisation as a threat to the political and economic stability of the country^[14]. In this connection, A.K. Baruah argues that the champions of 'Indian Nationalism' could not realise that appreciation of the aspirations of the smaller nationalities specially in respect of linguistic cultural identity would in fact strengthen political integration.

The failure and reluctance of the Congress to grasp the reality of a basically pluralistic Indian polity has led the party to adopt policies such as nationalisation of political issues, political destruction of the state political supremos resulting in disintegration of the Congress organisation in the districts and the selection of Chief Ministers in the States who lack independent bases of power and can, therefore, be counted upon to follow the directives of the Central Government. The party's preference for centralisation is also evident in its Manifesto for the 1980 elections which specifically stressed that 'the planning

process' would 'once again' be used 'to reorganise the national economy' and that the state governments would be persuaded to implement national, uniform policies on subjects included in the 'State List' under the Constitution^[15]. Brass argues that the precise purpose for which the 'State List' was inserted in the Indian Constitution was to allow the states independent powers of legislation on certain subjects exclusively concerning the states. According to him, deliberate interference of the Congress with the state's legitimate jurisdiction and attempts to lower the prestige of the state leaders have encouraged state autonomy movements and the growth of regional feelings throughout India^[16]. Another factor fomenting discontent and tensions in a multi-cultural society like India noted by A.K. Baruah is that except for the regional parties and a small section of the left, the dominant political opinion in India today represented by the Congress views India as one nation and perceives the concept of the state as inseparable from the idea of nation. Refusal to recognise small communities as nationalities breeds discontent among the smaller nationalities inciting some aggressive sections to propagate anti-India ideas. Unless this trend is reserved, warns Baruah, there may be an acute crisis in the Indian political community. In sharp contrast with the Congress standpoint, the communists have been advocating the theory of multi-national India and considering the right of self-determination as an essential condition for the unity of India.

Lenin saw the rise of nationalism as a transient political phenomenon more than counterbalanced by a concurrent trend towards increasing internationalisation of economic, political and cultural life. This is why he did not come up with explicit definitions of such concepts as nation, nationality and nationalism. But the basic thrust of his thinking was to see these as economic and political phenomena—the result of the centralising tendencies of capitalist modernisation. It is this methodology that has dominated the thinking of the Indian left on the 'national' or 'nationality' question where this question now refers essentially to the internal political arrangements of an Indian

Union comprising a number of linguistic territorial state units and confronted with a variety of regional pressures.

The Communist Party of India, as a matter of fact, has never accepted the new Indian political system. It has been eager to see India organised either on the Soviet or the Chinese model rather than on the democratic model of the West. The Second Congress of the CPI which met in March, 1948, took a decision for a determined democratisation of India and its conversion into a Union of national people's democratic republics on the basis of the principle of national self-determination and the abolition of princely states^[16].

In sophisticated Marxist accounts, there is recognition of the existence of a 'dual consciousness', of a pan-Indian identity as well as of regional, linguistic-based 'nationalism'. The National Movement is said to have fostered and promoted both kinds of identities. It is believed that behind these regional, nationality or national movements are not distinct regional bourgeoisie but different sections of ruling class alliance or bloc, as well as sections of the working class and peasantry with their specific democratic aspirations. In general, the Marxists support demands for greater state autonomy because it is said to enhance democracy^[17]. However, they make a distinction between regional claims or movements backed by the oppressed classes and those backed by oppressor classes. This divergence reveals itself largely through the kind of opposition parties leading these movements or making claims, or in the character of the party in government in the states. Thus, CPI and CPI (M) led states by definition express the aspirations of the working class and oppressed peasantry just as bourgeoisie parties in the states represent the interests of segments of the ruling class or bloc^[18]. In other words, the Communist Parties in India judge regional demands as well as demands of nationalities on the basis of their class character and support or oppose these demands accordingly, at least from the theoretical point of view.

But the dichotomy in the Communist stand becomes evident when in specific situations like the Assam Movement or the Gorkhaland

Movement, the Communists failed to live up to the aspirations of smaller nationalities.

Conclusion

It is evident from the above discussion that a number of ethnic groups and communities in contemporary India have been asserting their rights as nationalities because they perceive a threat to their identity and seek to protect the same by trying to extract as many concessions as possible from the central political authorities. It is this process of bargaining with the Centre for a better deal which appears to be associated very often with the politics of assertion of nationalities in India. To sum up, it may be argued that in order to achieve a genuine political integration of India, it is essential for the Indian state to appreciate the aspirations of these nationalities. An understanding of the nationality question in India will, therefore, require an enquiry into these processes.

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