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CONTENTS OF THE ISSUE

- i. Copyright Notice
 - ii. Editorial Board Members
 - iii. Chief Author and Dean
 - iv. Contents of the Issue
-
1. Sustainable Companies, Addressing the Climate Change: A Theoretical Review. *1-9*
 2. Knowledge Management as an Extension of Organisational Learning Process. *11-17*
 3. Service Quality Gap and its Impact on the Performance of Indian Health Insurance Companies. *19-41*
 4. Workplace Spirituality and Pro-Environmental Behavior: The Role of Employee Engagement and Environmental Awareness. *43-54*
 5. An Empirical Study on the Determinants of Job Stress and its Coping Techniques among College Educators. *55-61*
-
- v. Fellows
 - vi. Auxiliary Memberships
 - vii. Preferred Author Guidelines
 - viii. Index



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Sustainable Companies, Addressing the Climate Change: A Theoretical Review

By Carmen Echazarreta Soler & Albert Costa Marcé

Universitat De Girona

Summary- Climate change is an unavoidable threat with potentially irreversible effects. In the current economic context, globalization significantly increases the unbalanced use of finite, non-renewable sources of energy. This study aims to describe the main characteristics of sustainable companies, based on ideals and values that are committed to the development of the planet, consuming fewer resources than those that they create. Sustainable companies are based on fundamental principles such as the environment (renewable energy resources, sustainable development, preservation of the environment, responsible energy use, minimization of emissions, eco-efficiency, and the circular economy) and mobility (collective public transport, electric vehicles, clean non-motorized mobility systems). In light of this situation, a number of improvement actions have been proposed aimed at sustainable business development (smart environmental sensor networks, energy efficiency, integrated water cycle management, efficient lighting, smart metering, smart irrigation, environmental protection, smart waste management, smart public transport, monitoring of tolls and access to restricted areas, traffic management, fleet management, smart parking, and electric vehicles). Following a theoretical review of the main related studies, it is concluded that there are gaps in information and research related to climate change. At the same time, a further conclusion is that the instruments currently used to mitigate its effects are insufficient and inadequate.

Keywords: *sustainable companies, environment, climate change, environmental degradation, waste generation, sustainable development, mobility.*

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Sustainable Companies, Addressing the Climate Change: A Theoretical Review

Empresas Sostenibles, Afrontando El Cambio Climático: Una Revisión Teórica *

Carmen Echazarreta Soler ^α & Albert Costa Marcé ^ο

Resumen- El cambio climático representa una amenaza apremiante y con efectos potencialmente irreversibles. En el entorno económico actual, la globalización incrementa de forma significativa el uso no equilibrado de recursos energéticos finitos no renovables. El objetivo de este estudio es describir las principales características de las empresas sostenibles, sustentadas en ideales y valores comprometidos con el desarrollo del planeta, consumiendo menos recursos de los que generan. Las empresas sostenibles se basan en dos principios fundamentales como son el medio ambiente (recursos energéticos renovables, desarrollo sostenible, preservación del medio ambiente, consumo responsable de energía, minimización de emisiones, ecoeficiencia, economía circular) y la movilidad (transporte público colectivo, vehículo eléctrico, sistemas de movilidad limpios y no motorizados). Ante esta situación se plantean una serie de acciones de mejora para el desarrollo empresarial sostenible (redes de sensores ambientales inteligentes, eficiencia energética, gestión del ciclo integral del agua, alumbrado eficiente, smart metering, riego inteligente, protección medioambiental, gestión inteligente de residuos, transporte público inteligente, control de peajes, acceso a zonas restringidas, gestión de tráfico, gestión de flotas, parking inteligente, y vehículo eléctrico). A través de la revisión teórica de los principales estudios relacionados, se concluye que existen lagunas de información e investigación en relación con el cambio climático. A la vez se concluye que los instrumentos utilizados actualmente para la mitigación de sus efectos son insuficientes e inadecuados. Se requiere con urgencia mayores índices de gobernanza y estrategia transnacional. Finalmente, surge la necesidad de empresas sostenibles que compatibilicen el desarrollo empresarial con el medio ambiente y la protección del planeta.

Palabras Clave: *empresas sostenibles, medio ambiente, cambio climático, degradación ambiental, recursos energéticos, generación de residuos, desarrollo sostenible, movilidad.*

Summary- Climate change is an unavoidable threat with potentially irreversible effects. In the current economic context, globalization significantly increases the unbalanced use of

finite, non-renewable sources of energy. This study aims to describe the main characteristics of sustainable companies, based on ideals and values that are committed to the development of the planet, consuming fewer resources than those that they create. Sustainable companies are based on fundamental principles such as the environment (renewable energy resources, sustainable development, preservation of the environment, responsible energy use, minimization of emissions, eco-efficiency, and the circular economy) and mobility (collective public transport, electric vehicles, clean non-motorized mobility systems). In light of this situation, a number of improvement actions have been proposed aimed at sustainable business development (smart environmental sensor networks, energy efficiency, integrated water cycle management, efficient lighting, smart metering, smart irrigation, environmental protection, smart waste management, smart public transport, monitoring of tolls and access to restricted areas, traffic management, fleet management, smart parking, and electric vehicles). Following a theoretical review of the main related studies, it is concluded that there are gaps in information and research related to climate change. At the same time, a further conclusion is that the instruments currently used to mitigate its effects are insufficient and inadequate. Greater indexes of governance and transnational strategy are urgently needed. Finally, there is also a need for sustainable companies that combine business development with the environment and the protection of the planet.

Keywords: *sustainable companies, environment, climate change, environmental degradation, waste generation, sustainable development, mobility.*

1. INTRODUCCIÓN

Según el Acuerdo de París en virtud de la Convención marco sobre el cambio climático organizado por Naciones Unidas, “El cambio climático representa una amenaza apremiante y con efectos potencialmente irreversibles para las sociedades humanas y el planeta y, por lo tanto, exige de la cooperación más amplia posible de todos los países y su participación en una respuesta internacional efectiva y apropiada, con miras a acelerar la reducción de las emisiones mundiales de gases de efecto invernadero. Las emisiones de gases de efecto invernadero siguen aumentando y, al ritmo actual, la temperatura media global este siglo aumentará más de tres grados centígrados. El mundo ya sufre los efectos del cambio climático tales como el aumento del nivel del mar, el deshielo de los glaciares y otros fenómenos más extremos.” (United-Nations, 2015).

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* El presente estudio de revisión teórica ha sido elaborado por el grupo de investigación Arpa (Grupo de Análisis de la Recepción de las Pantallas Audiovisuales) del Departamento de Filología y Comunicación, que desarrolla el proyecto Vusiness, del inglés “Business”, negocios, con “V” de “Values”, valores. Vusiness promueve las empresas abiertas, democráticas, inteligentes, sostenibles e inclusivas, que deben inspirar el futuro.

En este sentido, según Kramers, Höjer, Lövehagen, y Wangel (2013) la variabilidad de las precipitaciones puede poner en riesgo el suministro de agua dulce que afecta a más de un 40% de la población mundial. Asimismo, el incremento de las emisiones de dióxido de carbono tiene efectos nocivos sobre todos los ecosistemas del planeta. Según Eguiguren (2011), para combatir los efectos del cambio climático a través del desarrollo sostenible de las empresas, "Se requiere un sistema o comportamiento humano sostenible, comprometido con el desarrollo armónico del planeta y de la humanidad cuando, actuando desde una plena libertad responsable, contribuya a la riqueza y al bien común y no consume más recursos de los que genera".

En el entorno actual las empresas están adoptando cada vez más estrategias competitivas ante la creciente amenaza de un nuevo mercado económico, debido a la aparición de países con bajos costes de producción. Las empresas desarrollan procesos de deslocalización para conseguir abaratar los costes de producción, a pesar del aumento de consumos energéticos debido a los costes de transporte y del uso de tecnología menos eficiente (García, Mora, & Alés, 2009). En contraposición a este modelo de crecimiento se requerirán fuertes reducciones de las emisiones mundiales para hacer frente al cambio climático con urgencia.

Las crisis económicas y financieras se hacen cada vez más frecuentes, profundas y globales y su repercusión ocurre fundamentalmente en los sectores sociales (Hadad Hadad & Valdés Llanes, 2010). De forma adicional, el cambio climático es un problema común de la humanidad, por lo que en ambos casos, se precisa adoptar medidas que respeten, promuevan y tomen en consideración sus obligaciones con respecto a "los derechos humanos, el derecho a la salud, los derechos de los pueblos indígenas, las comunidades locales, los inmigrantes, los niños, las personas con discapacidad y las personas en situaciones de vulnerabilidad y el derecho al desarrollo, así como la igualdad de género, el empoderamiento de la mujer y la equidad intergeneracional" (United-Nations, 2015).

Para hacer frente al cambio climático cabe adoptar medidas de respuesta desde el sector privado. Para gestionar empresas se requieren políticas y valores corporativos propios de una cultura empresarial sostenible a nivel medioambiental. Las empresas cuya misión se sustenta en ideales y valores comprometidos con el planeta contribuyen al bien común y a la vez pueden generar un volumen de beneficios económicos similar al resto de las empresas (Eguiguren, 2011).

Observando la importancia de garantizar la integridad de todos los ecosistemas y la protección de la biodiversidad, surgen modelos empresariales alternativos al capitalista como el denominado People, Planet y Profit (3P), desarrollado por Fisk (2010), que

plantea la necesidad de establecer vínculos entre las esferas sociales, medioambientales, corporativas y económicas para superar las carencias del modelo actual.

Según Klionsky et al. (2012) las empresas sostenibles actúan en el mercado con sentido de responsabilidad, transparencia, democracia, participación y ética. Asimismo, se crean en entornos en los que se reconoce la necesidad de promover las energías sostenibles.

La presente revisión teórica pretende exponer el resultado de un proceso sistemático de selección de estudios relevantes sobre conceptos relacionados con las empresas y la sostenibilidad, con el objetivo de sentar las bases científicas para la definición de un modelo alternativo de creación, dirección y gestión de empresas.

II. EMPRESAS SOSTENIBLES

En 2012 las Naciones Unidas ponen en marcha una encuesta global para conocer la opinión de la ciudadanía respecto los retos de la humanidad. A partir de ahí los líderes mundiales acuerdan los Objetivos de Desarrollo Sostenible (ODS), agenda conformada por 17 objetivos y 169 hitos que se proponen lograr para el año 2030. A nivel medioambiental destacan los siguientes ámbitos: a) Agua limpia y saneamiento; b) Energía asequible y no contaminante; c) Ciudades y comunidades sostenibles; d) Producción y consumo responsables; e) Acción para el clima; f) Vida submarina, y g) Vida de ecosistemas terrestres.

En coherencia con tales objetivos, Kramers et al. (2013) plantean que las empresas sostenibles se basan en dos principios fundamentales como son el medio ambiente, definiéndolo como el control de la huella del carbono o gases de efecto invernadero (GEI); monitorización y control de la polución y mejora de la calidad del aire; generación de residuos y contaminación; sostenibilidad medioambiental; eficiencia, reutilización y reciclaje de recursos; impulso de las energías renovables y mejora de las convencionales; reducción del consumo de agua; mejoras de la climatización y promoción de zonas verdes y la movilidad, en el sentido de la disminución de las emisiones de gases contaminantes, transporte eficiente, limpio y multimodal.

a) Medio Ambiente

Los primeros signos de degradación ambiental aparecen en Europa a finales de los años sesenta, situación que precipita que la comunidad internacional empiece a cuestionarse el actual modelo de apropiación industrial de la naturaleza, basado en la sobreexplotación de los recursos naturales no renovables, generador de la situación actual del medio ambiente (Kramers et al., 2013).

La globalización incrementa de forma significativa el uso no equilibrado de recursos energéticos finitos no renovables (combustibles fósiles como el petróleo, el carbón y el gas natural e isótopos radioactivos como los de uranio y plutonio). Según concluyen distintos estudios, si el consumo continuara con índices similares al actual, los recursos energéticos finitos se terminarían en el año 2050. Ante esta situación se propone la sostenibilidad ambiental desarrollada como eje de contra-globalización y alma del Foro Social Mundial, encuentro anual que llevan a cabo varios movimientos sociales, con el objetivo de celebrar la diversidad, discutir temas relevantes y buscar alternativas en las problemáticas sociales derivadas del neoliberalismo y la globalización económica (Kuklinski, 2007).

En segundo lugar, de acuerdo con Quesada (2009), el cambio climático es actualmente otro de los factores que pone en riesgo la sostenibilidad del planeta. El autor analiza los principales efectos del cambio climático y enumera aspectos como el aumento del nivel del mar, las olas de calor, las tormentas violentas, la sequía, las especies en extinción, las enfermedades, la desaparición de glaciares, etc. De igual forma, destaca medidas impulsadas por los gobiernos para favorecer el desarrollo sostenible como son el Protocolo de Kioto contra el cambio climático a fin de aumentar la ambición en el período anterior a 2020, el Plan Nacional de Asignación de Emisiones y muy especialmente el Acuerdo de París del 11 de diciembre de 2015 en el Marco de la Convención sobre el Cambio Climático.

En tercer lugar, otro tema que cabe abordar según Arroyave Rojas y Garcés Giraldo (2012) es la generación de residuos (waste generation) especialmente las emisiones de gases con efecto invernadero, destacando los incrementos producidos de óxidos de nitrógeno, dióxido de carbono y metano, sumados a aspectos que agravan como la deforestación. Durante el proceso productivo, los residuos representan un coste adicional al proceso productivo ya que implica un mal aprovechamiento de la materia prima a la vez que origina impactos económicos, ambientales y sociales importantes asociados a los costos de tratamiento y al deterioro de la calidad de vida. Las principales técnicas de minimización de residuos para la prevención de la contaminación se pueden dividir en cuatro categorías como son el manejo más estricto del inventario de productos, la modificación de los procesos de producción, la reducción del volumen de residuos y la recuperación de residuos.

En cuarto lugar, según la OMS la contaminación atmosférica es el principal factor ambiental de riesgo de mortalidad evitable. El aire que respiramos debe ser lo más limpio posible, lo cual significa que es necesario un esfuerzo para controlar los

umbrales máximos de dióxido de sulfuro, dióxido de nitrógeno, partículas, plomo, benceno y monóxido de carbono.

Al principio los gobiernos proponían medidas decrecimiento cero, basadas en contaminar y reciclar con el mismo volumen, para contribuir a equilibrar la ecología. En este sentido se pusieron en marcha numerosas políticas de creación de sistemas para reciclar financiados por los que contaminaban. Se buscaba sensibilizar a la población en general ya que debían contribuir al coste del reciclado para financiar el eco-equilibrio.

El problema está en que técnicamente se trata de una propuesta utópica ya que en la actualidad muchos de los recursos existentes no son renovables ni reciclables. Por lo tanto, teniendo en cuenta que tecnológicamente hay muchos recursos que no se pueden reciclar o regenerar, igualmente el medio ambiente se degradaría con este modelo, aunque fuera de forma más lenta. En consecuencia, se descarta esta vía para valorar los recursos naturales y mantener un desarrollo sostenible (Calomarde José, 2000).

La World Commission on Environment and Development genera el concepto de Desarrollo sostenible, según el cual el progreso económico debe satisfacer sus necesidades energéticas presentes sin comprometer las futuras. Se trata, pues, de hacer compatible la gestión de los recursos naturales, el impacto positivo sobre el medio ambiente y la promoción y cuidado de la naturaleza con el desarrollo económico.

En un entorno natural estabilizado y equilibrado debe ser compatible el desarrollo empresarial con el medio ambiente y la protección del planeta a través del desarrollo sostenible.

Las empresas sostenibles, siguiendo las pautas de Eguiguren (2011), deben afrontar con rigor temas amplios que van desde la optimización de los recursos naturales, al manejo de residuos o a la capacitación y concienciación de sus trabajadores, clientes y proveedores. Por este motivo, aunque está normatizado en la mayoría de los países, la organización debe evaluar continuamente el impacto medio ambiental que tienen sus acciones.

Tan sólo se podrá considerar una organización como sostenible si es capaz de comprometerse con el desarrollo equilibrado del planeta, generando una actividad neutra, es decir, respetuosa con los ecosistemas y no consumiendo más recursos de los estrictamente necesarios para su actividad y nunca superiores a los que genera. Se recomienda la utilización de las tres R: reducción de emisiones de CO² y otros gases que producen efecto invernadero, reciclaje de los residuos que genera para su posterior utilización en otras actividades o procesos productivos y recuperación de otros recursos potenciando el uso de las energías renovables.

Las acciones de preservación del medio ambiente también serán muy importantes en dos ámbitos como son el consumo de agua (water consumption) y de alimentos. Es importante investigar y promover técnicas de cultivo de productos vegetales con necesidades inferiores de agua así como del uso de abonos químicos y pesticidas. De este modo se podría promover el desarrollo de la producción agrícola en sitios del planeta caracterizados por la falta de agua y fertilizantes. Al mismo tiempo se tienen que cambiar los hábitos de demanda de alimentos basados en dietas hipocalóricas excedentarias en grasas animales y proteínas por otras equilibradas con proteínas vegetales, que consumen menos recursos naturales y son en general más accesibles.

En este contexto, la Huella Ecológica es el indicador del impacto ambiental generado por la demanda humana que se hace de los recursos existentes en los distintos ecosistemas de la Tierra, relacionándola con la capacidad ecológica del planeta para regenerar sus recursos. Las empresas cada vez fabrican los productos con mayor número de componentes que se puedan reutilizar con la finalidad de reducir el consumo de materiales y energías de origen no renovable. En este sentido se están incrementando la proliferación de materiales vegetales renovables que permiten la reducción de la utilización de combustibles fósiles para su producción.

Siguiendo, la Huella Ecológica Corporativa es un indicador aplicable a las empresas y a las organizaciones, capaz de proporcionar un marco de referencia para el análisis de la demanda de bioproductividad. Estos indicadores fundamentan la recogida de datos para su análisis posterior en variables como los a) Consumos e intensidad energética; b) Productividad natural c) Capacidad de productividad energética; d) Factor de equivalencia; e) Consumo eléctrico; f) Consumo de combustibles; g) Consumo de materiales (generales, de construcción y amortizables); h) Consumo de servicios, residuos emisiones y vertidos; i) Residuos sólidos; j) Emisiones a la atmósfera y de los vertidos; k) Consumo de recursos agropecuarios; l) Alimentos; m) Consumo de recursos forestales; n) Uso del suelo; ñ) Emisiones de CO₂, la huella del carbono (carbon foot print); o) Ecoeficiencia, y p) Huella social y cultural.

De forma complementaria, proliferan las industrias orientadas a la minimización de emisiones, que emplean como materias primas los desechos de otras empresas y ciudades a través de la puesta en marcha de industrias simbióticas. En particular el agua es de los recursos naturales que se han visto más afectados en las últimas décadas, en la que debido a una sobreexplotación indiscriminada y a una contaminación gradual, demanda una gran cantidad de recursos para mitigar los devastadores impactos generados.

A raíz de la Convención Marco sobre el Cambio Climático impulsado por Naciones Unidas en París, 114 multinacionales como Dell, Enel, Sony, Procter & Gamble, Thalys, Ikea, Carrefour, Kellogg o Wal-Mart se han comprometido conjuntamente a adoptar objetivos de reducción de sus emisiones de gases de efecto invernadero en un plazo de dos años, para mantener en 2 grados C el calentamiento global.

La apuesta de presente y futuro por el desarrollo sostenible permite avanzar hacia una nueva ética política y empresarial. En este entorno, la Ecoeficiencia, que consiste en generar más bienes de consumo y servicios utilizando menos recursos y creando menos basura, contaminación y polución, es un recurso útil para combatir la escasez de recursos. La Ecoeficiencia se puede aplicar en el uso de energías convencionales como la eléctrica o en el uso de energías alternativas, equivalentes a las energías renovables o energía verde e incluso se podrían aceptar todas aquellas que no implican la quema de combustibles fósiles como el carbón, el gas y el petróleo. En esta definición amplia se incluyen la energía nuclear e incluso la hidroeléctrica.

Las empresas sostenibles aumentan el uso de energías naturales renovables o alternativas que se caracterizan por ser inagotables o por regenerarse por medios naturales. En contraposición a las no renovables como la energía fósil o nuclear, entre las renovables o verdes se enumeran la hidráulica, la solar térmica, la biomasa, la solar, la eólica, la geotérmica y la marina.

También en este entorno surge con fuerza la Ecoeficiencia en el uso de combustibles tales como la biomasa (de la madera, residuos agrícolas y estiércol) capaz de proporcionar energías sustitutivas a los combustibles fósiles. En este sentido, se requieren políticas para reequilibrar las áreas rurales y las ciudades ya que el consumo de combustibles fósiles debido al transporte y a la logística son altamente contaminantes. Con el objetivo de reducir las emisiones de CO₂ se hace imprescindible su transformación en sistemas ecológicamente más equilibrados (Kramers et al., 2013).

En la categoría de biomasa se pueden influir desde agrocombustibles líquidos como el biodiesel o el bioetanol, a gaseosos como el metano o sólidos como la leña. En la búsqueda de equilibrio, evidentemente se trata de no emplear más biomasa que la producida de forma neta por el ecosistema explotado. Las tecnologías desarrolladas y los materiales reciclables deben evitar la desertización y contaminación de extensiones y superficies del planeta.

Otro aspecto que cabe destacar es el consumo de materiales ecoeficientes. Por ejemplo en el caso de la construcción cada vez aparecen más materiales como cementos descontaminantes, cales hidráulicas naturales, cementos transparentes, etc. que se utilizan

de forma prioritaria en la construcción o rehabilitación. Habitualmente, los materiales ecoeficientes tienen la característica que presentan mayor resistencia a las inclemencias del tiempo, son más baratas en términos logísticos y respetan el aspecto natural del entorno. En el momento de compra de materiales es necesario identificar y valorar las etiquetas ecológicas y priorizar el nivel de consumo en la compra de vehículos y ordenadores.

Durante la ejecución de los servicios, las empresas deben enfatizar la Ecoeficiencia en aspectos como la reducción de desechos, el uso del suelo, el consumo de recursos agropecuarios y pesqueros, el consumo de recursos forestales y agua, análisis de las posibles pérdidas de agua y pérdidas por rotura así como el fomento de la utilización de aguas pluviales para el riego.

Una variable destacada es la del capital natural que según Fisk (2010) se refiere a los recursos naturales del planeta y de la biosfera tales como las plantas, el aire, el petróleo, los animales o los minerales que actúan como medios naturales de producción de bienes ecosistémicos ya que producen oxígeno, depuran el agua de forma natural y previenen la erosión y la polinización. El capital natural en el que una empresa o institución puede invertir es por ejemplo en a) capital forestal (Los bosques con la consecuente reducción de CO²); b) capital agrícola (granja sostenible, agricultura ecológica y cultivos energéticos); c) capital marino y capital pesquero. A nivel general, en la línea de United-Nations (2015) "se recomienda el uso de incentivos positivos para reducir las emisiones debidas a la deforestación y la degradación de los bosques, además de la promoción de la conservación, gestión sostenible de los bosques, y el aumento de las reservas forestales de carbono, así como de los enfoques de política alternativos, así como promover la mitigación de las emisiones de gases de efecto invernadero, fomentando al mismo tiempo el desarrollo sostenible".

En lo que se refiere al mar, se considera también un capital natural en el que se podría intervenir para un desarrollo marino y de pesca sostenible para combatir el declive general del sector pesquero.

En el entorno actual, el modelo económico lineal de "tomar, hacer, desechar" requiere grandes cantidades de energía y otros recursos baratos y de fácil acceso en nuestro planeta, pero está llegando al límite de su capacidad. En contraposición, la economía circular, modelo desarrollado por MacArthur (2013), es una alternativa basada en los principios de "reparación y regeneración", y que pretende conseguir que los productos, componentes y recursos en general mantengan su utilidad y valor en todo momento.

Por ejemplo, según la economía lineal, las empresas compran maquinaria que se amortiza con

una vida útil de entre cuatro y cinco años, generando un residuo difícil de reutilizar y reciclar. Según la economía circular, las empresas compran el uso de la maquinaria. Este cambio de paradigma implica que la empresa proveedora de dicho servicio es la responsable y primera interesada de alargar la vida útil de la maquinaria durante el ciclo técnico, reparándola y usando los componentes más duraderos para ofrecer las mejores prestaciones.

La economía circular propone un ciclo continuo de desarrollo positivo que conserve y mejore el capital natural, optimizando el uso de recursos y minimizando los riesgos del sistema al gestionar una cantidad finita de existencias y flujos no renovables.

La economía circular se fundamenta sobre tres principios clave: preservar y mejorar el capital natural, optimizar el uso de los recursos y fomentar la eficacia del sistema. Los productos se diseñan para su posterior desmontaje y readaptación. Los materiales utilizados no son tóxicos cosa que permite su compostaje con facilidad. En el caso de materiales artificiales, polímeros o aleaciones, están diseñados para poder utilizarse de nuevo con la mínima energía y la máxima calidad. La economía circular restaurativa implica una reducción significativa de la energía necesaria para su funcionamiento, la cual cosa permitiría el uso exclusivo de energías renovables. Entre las empresas que están investigando y empezando a aplicar sistemas de economía circular destacan Cisco, Google, H&M, King Fisher, Philips, Renault y Unilever. A continuación se proponen una serie de medidas relacionadas con conceptos clave para el medio ambiente que se desarrollan y aplican en las empresas sostenibles (Kramers et al., 2013):

Tabla 1: Acciones propias de las empresas sostenibles respecto a distintos conceptos relacionados con el medio ambiente (Adaptado de Barcelona-City-Council (2012))

- Corresponsabilidad (*Joint responsibility*): Consumo de bienes y servicios de forma responsable (comercio justo, comercio de proximidad, productos ecológicos, etc.)
- Energía verde (*Green energy*): Ahorro de recursos naturales y logro de la máxima eficiencia en su producción, distribución y uso, en especial de agua y energía.
- Mitigación del cambio climático (*Climate change mitigation*): Evolución hacia una economía baja en emisiones, priorizando la reducción del consumo de energía e impulsando el uso de energías renovables con menos impacto.
- Reducción de emisiones (*Emission reduction*): Prevención y minimización de las emisiones de efecto invernadero, reduciéndolas a cero o en caso de imposibilidad tendencia a la compensación y autosuficiencia energética.
- Reducción de residuos (*Waste reduction*): Mejora de la gestión de los residuos priorizando por este orden la reducción, la reutilización y el reciclaje. Incrementar el compostaje.
- Reducción de ruido (*Noise reduction*): Mejora del confort acústico. Disminución de los niveles de ruido, especialmente en la circulación de vehículos con motor de combustión.
- Turismo sostenible (*Sustainable tourism*): Avance hacia un turismo sostenible en equilibrio con el territorio y que revierta positivamente en la comunidad local.
- Uso eficiente del agua (*Efficient water use*): Ahorro de recursos naturales y logro de la máxima eficiencia en su producción, distribución y uso.
- Verde urbano (*Urban green*): Ampliación del verde urbano en polígonos y otras zonas.

Adaptado de Barcelona-City-Council (2012)

b) Movilidad

A nivel de movilidad, para avanzar hacia un sistema logístico y de transporte eficaz, seguro, sostenible, interconectado, integrado y de bajo impacto medioambiental las empresas tienen que prescindir progresivamente de los vehículos contaminantes de su flota para contribuir a la reducción de la contaminación industrial del entorno (Seisdedos et al., 2015a).

Globalmente, se requiere la implantación estratégica de zonas industriales con bajas emisiones, la aprobación de medidas de fiscalidad ambiental y la distinción de distintos niveles de peajes en función de la contaminación de cada vehículo. De este modo, se fomenta que se incorporen en las flotas vehículos eléctricos y de muy bajas emisiones, además de contribuir a generalizar el uso de medios de transporte alternativos al vehículo como la bicicleta o el transporte público para ir al trabajo (Kramers et al., 2013).

Mejorar el aire que respiramos es una oportunidad para reindustrializar el país con las mejores tecnologías disponibles, la reducción de la dependencia del petróleo, el empujón a la electrificación del parque de vehículos y el paso definitivo a un transporte público de calidad y competitivo.

El transporte rodado es la principal fuente de contaminación, tanto por lo que se refiere a los óxidos de nitrógeno como a las partículas en suspensión. El volumen creciente de tráfico, el aumento de la flota de vehículos y la dieselización son las principales causas. En este sentido, un ejemplo de amplia repercusión mediática se produce en septiembre de 2015 cuando la Agencia de Medio Ambiente de Estados Unidos

(EPA) emite una notificación de violación de la Ley de Aire Limpio a Volkswagen. Se acusa al fabricante alemán de incluir en sus vehículos diésel de cuatro cilindros un software que permite eludir las normas de emisiones de ciertos contaminantes del aire, como las emisiones de dióxido de carbono. Según distintas pruebas se ha determinado que los vehículos emiten hasta 40 veces más de contaminación que lo permitido.

Según Mollinedo (2014) las zonas industriales tienen que apostar por mejorar las condiciones de movilidad urbana y favorecer la movilidad racional. El transporte público colectivo (metro, autobús, ferrocarril, tranvía, etc.) debe ser cómodo, interconectado con la red urbana, con buena frecuencia de paso y económicamente competitivo. También se recomienda el uso de tarifas especiales para incrementar el uso del transporte y disminuir la contaminación. En este sentido es importante que los usuarios reciban información útil y en tiempo real para que se puedan ahorrar tiempo, hacer los transbordos con mayor agilidad y contribuir a reducir la huella de carbono. A la vez, es importante que los sistemas públicos de transporte reciban el feedback de los usuarios la cual permite planificar con mejoras los viajes posteriores.

Para contribuir a la mejora de la calidad del aire, es necesario reducir el parque de vehículos circulante y conseguir la transformación de los vehículos restantes hacia un modelo de movilidad de bajas emisiones, priorizando el vehículo eléctrico, que es el único sistema en la actualidad que emite cero emisiones. Se proponen medidas para este tipo de vehículos como la bonificación positiva de tasas municipales de estacionamiento en zonas reguladas,

exención del incremento de tarifas de peajes, bonificación de la tasa de contaminación atmosférica, etc.

Según los estudios de Buehler y Pucher (2012) es necesario recuperar la importancia que tenían para la movilidad urbana la utilización de sistemas de movilidad limpios y no motorizados para ir al trabajo, como son ir a pie y en bicicleta. Los autores proponen a las empresas apostar por zonas industriales en las que se creen infraestructuras sin discontinuidad para la movilidad cotidiana y segura a pie y en bicicleta.

La zona portuaria y aeroportuaria son infraestructuras logísticas básicas para las empresas gracias a sus funciones comerciales, de pasajeros, logísticas y energéticas. En estos entornos es necesario promover el uso del gas natural licuado (GNL) y otros combustibles alternativos a los hidrocarburos en

barcos, camiones de alto tonelaje y maquinarias de trabajo (Dameri & Garelli, 2014).

Un ejemplo de buenas praxis es la empresa de aparcamientos Saba, uno de los grandes operadores de Europa. La empresa sitúa la RSC como un elemento central de su gestión apostando por: a) movilidad sostenible (implantación del VIA T en entrada y salida) y modelo de gestión de la movilidad en los centros urbanos; b) eficiencia energética y huella de carbono; c) sistema integrado de gestión de residuos y reducción de consumos; d) apuesta del parque de vehículos eléctricos y e) integración laboral de personas con discapacidad.

A continuación se definen una serie de conceptos clave relacionados con la movilidad que se desarrollan y aplican en el ámbito de las empresas sostenibles (Kramers et al., 2013):

Tabla 2: Acciones propias de las empresas sostenibles respecto a distintos conceptos relacionados con la movilidad

- Aire más limpio (*Cleaner air*): Mejora de la calidad del aire, especialmente respecto a los óxidos de nitrógeno, las partículas en suspensión y los alérgenos. Disminución del tráfico motorizado, fomentando los combustibles menos contaminantes y el vehículo eléctrico. Potenciación del uso y la seguridad en la bicicleta. Acceso al transporte público, aumentando su flota. Implantación del vehículo eléctrico, priorizando las fuentes de energía renovable.
- Movilidad equitativa (*Equitable mobility*): Mejora de la accesibilidad universal al transporte público, a los edificios y los espacios de concurrencia, evitando obstáculos innecesarios y ordenando el aparcamiento. Promoción de los desplazamientos no motorizados. Mejora de la superficie destinada a los peatones.
- Movilidad sostenible (*Sustainable mobility*): Promoción de estrategias disuasorias del uso del vehículo privado motorizado. Promoción de la conducción eficiente.

Adaptado de Barcelona-City-Council (2012)

c) *Acciones para la sostenibilidad en las empresas*

Según Passetti y Tenucci (2016) el apoyo presente y futuro para un desarrollo sostenible abre la vía de una nueva política y ética empresarial. En este contexto, la escasez de recursos puede ser combatida a través de la eco-eficiencia, que implica la producción de bienes y servicios que usan menos recursos y generan menos residuos y contaminación. La eco-eficiencia puede ser aplicada en el uso de energía convencional, como la electricidad, o en alternativas, renovables o verdes; de hecho se puede usar sobre todas las energías que no implican la quema de combustibles fósiles como el carbón o el gas. Esta definición amplia incluso incluye las nucleares y las hidro-eléctricas.

A continuación se detalla una propuesta de acciones de mejora relacionadas con una gestión empresarial sostenible (Seisdedos et al., 2015b). (Ver tabla 3):

Tabla 3: Acciones para la sostenibilidad en las empresas

- Redes de sensores ambientales inteligentes (detección automática de niveles de ruidos y contaminación acústica)
- Eficiencia energética (empleo de equipos de alta eficiencia energética -cogeneración, calderas de alta eficiencia, domótica) y soluciones que promueven la gestión del consumo energético en climatización, iluminación o ascensores...
- Gestión del ciclo integral del agua (empleo de la tecnología para que el agua sea un ciclo cerrado: captación, transporte, distribución, alcantarillado, lectura de consumos, facturación, cobro, depuración y potabilización,...)
- Alumbrado eficiente (uso de tecnología led, sistemas de iluminación inteligentes y bajo demanda o mediante sensores de presencia)
- Smart metering (tele medición de consumos de agua, gas, electricidad proporcionando una mejor información que favorece ahorro y eficiencia en el consumo)
- Riego inteligente (automatización del riego y redes de sensores para medir cuándo y cuánto es necesario regar)
- Protección medioambiental (detección y reacción ante emergencias medioambientales: escapes, incendios, etc.)
- Gestión inteligente de residuos (información en tiempo real sobre el llenado de los contenedores; programación dinámica en función de las rutas de los camiones de recogida de basuras, etc.)
- Transporte público inteligente (prioridad semafórica para transporte público, gestión integrada de tarifas entre bus, metro, cercanías, información en tiempo real de incidencias y frecuencias, servicios de asesoramiento digital al viajero, etc.)
- Control de peajes / acceso a zonas restringidas (identificación automática de vehículos autorizados, cobro automatizado por uso de carreteras de peajes,...)
- Gestión de tráfico (predicción del tráfico, semáforos inteligentes, información al conductor en tiempo real, avisos sobre incidencias, servicios de asesoramiento digital al conductor, etc.)
- Gestión de flotas (vehículos de propulsión ecológica, localización en tiempo real mediante GPS, gestión y seguimiento digital de consumos, informes de desempeño, gestión del mantenimiento, etc.)
- Parking inteligente (información en tiempo real sobre disponibilidad de plazas de aparcamiento, reserva de plazas online, tarifas de estacionamiento variables, etc.)
- Vehículo eléctrico (despliegue de redes de puntos de carga, sistemas de información sobre ubicación y disponibilidad, sistemas de alquiler público de vehículos eléctricos, etc.)

Adaptado de Barcelona-City-Council (2012); Seisdedos et al. (2015b)

III. A MODO DE CONCLUSIÓN

Tras analizar distintos estudios recientes sobre las empresas sostenibles se concluye que pueden ser una alternativa útil para superar las insuficiencias que presenta el actual modelo energético. Las empresas sostenibles pueden dar una respuesta progresiva y eficaz a la amenaza apremiante del cambio climático, sustentándose en las conclusiones de los principales estudios recientes disponibles.

En la presente revisión teórica se integran y complementan los compromisos a nivel mundial de la Convención Marco sobre el Cambio Climático impulsado por Naciones Unidas en París (United-Nations, 2015); el Protocolo de Kyoto: Convenio internacional para la prevención del cambio climático; modelos como *People, Planet Profit* de Fisk (2010) y los interesantes estudios de Eguiguren (2011).

Los estudios analizados más relevantes destacan en primer lugar la necesidad de un análisis exhaustivo sobre las empresas que basan su gestión en un uso inteligente de la tecnología y la inclusividad, factores clave necesarios para complementar la sostenibilidad. Según (Seisdedos et al., 2015b), "El reto de las empresas es hacer compatible el desarrollo económico, el respeto al planeta y una mejor calidad de vida. Como en otros sectores, las tecnologías de la información y las comunicaciones están dando lugar a una gestión inteligente. Como las ciudades, las empresas son responsables de la mayor parte del

impacto medioambiental del ser humano. Son grandes consumidoras de recursos naturales (agua, energía, materias primas,...) y generan enormes cantidades de residuos."

En el estudio se valora la aprobación del Acuerdo de la Cumbre de París entre 195 países contra el cambio climático, que fija el techo a las emisiones de gases de efecto invernadero, establece un sistema de financiación así como medidas para combatirlo. En la línea de las conclusiones de la Cumbre, los distintos ejes en que se enfatiza tales como el medio ambiente y la movilidad son determinantes para: "a) Mantener el aumento de la temperatura media mundial muy por debajo de 2 °C con respecto a los niveles preindustriales, y proseguir los esfuerzos para limitar ese aumento de la temperatura a 1,5 °C con respecto a los niveles preindustriales; y b) Aumentar la capacidad de adaptación a los efectos adversos del cambio climático y promover la resiliencia al clima y un desarrollo con bajas emisiones de gases de efecto invernadero".

A raíz de los estudios analizados, en primer lugar se pone de relieve la necesidad de disponer de un análisis en profundidad de empresas que se fundamenten en factores como la inteligencia (*smart*) y la inclusividad, complementos necesarios a la sostenibilidad.

En segundo lugar se requiere de un modelo integrador basado en los resultados de la presente revisión bibliográfica, y que funda sus principios en tres

factores: inteligencia, sostenibilidad e inclusividad para poder generar, dirigir y gestionar empresas con valor.

En tercer lugar, se necesitan estudios científicos que definan indicadores cuantitativos y cualitativos para poder evaluar dicho nuevo modelo cuando nuevas tecnologías que según concluyen Seisdedos et al. (2015b) se pueden resumir en: a) Redes de sensores ambientales inteligentes; b) Eficiencia energética; c) Gestión del ciclo integral del agua; d) Alumbrado eficiente; e) Smart metering; f) Riego inteligente; g) Protección medioambiental; h) Gestión inteligente de residuos; i) Transporte público inteligente; j) Control de peajes / acceso a zonas restringidas; k) Gestión de tráfico; l) Gestión de flotas; m) Parking inteligente, y n) Vehículo eléctrico.

Finalmente, se requieren estudios experimentales, capaces de valorar los resultados fruto de la aplicación del modelo. Además, se recomienda desarrollar contenidos didácticos y material informativo y formativo del nuevo modelo para sensibilizar y formar la población general así como trabajadores, proveedores y clientes.

Los resultados del presente estudio deben ser considerados como preliminares y tienen que ser confirmados en análisis posteriores. La investigación en este ámbito debería ser continua y pluridisciplinar.

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Knowledge Management as an Extension of Organisational Learning Process

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Abstract- It is no longer strange for individuals and organisations alike to appreciate that only organisations that are innovative will survive in very turbulent economic landscape. It is also a fact that innovations can only be achieved when an organisation continuously learns and becomes a learning organisation. A learning organisation is characterized by the stock of both tacit and explicit knowledge which it has acquired over time and how the stock of knowledge is utilized. The stock of knowledge becomes useful only when it is shared and utilized for the overall improvement in all organisational processes and human capital enhancement.

This conceptual paper suggests that as important as the concept of knowledge management is, rather than treating it as a different management concept, it ought to be treated as a major component of organisational learning process. In fact, knowledge management is and should be an extension of organisational learning because when there is no learning; there will not be any knowledge to manage. This paper also revealed that lack of interpersonal relationship, lack of organisational trust, skills, and time inadequacy are the major factors that hinder organisational members from sharing knowledge.

Keywords: *information; knowledge; organisational resources; competitive advantage; innovativeness.*

GJMBR-A Classification: *JEL Code: M19*



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Knowledge Management as an Extension of Organisational Learning Process

Hillary Odor

Abstract- It is no longer strange for individuals and organisations alike to appreciate that only organisations that are innovative will survive in very turbulent economic landscape. It is also a fact that innovations can only be achieved when an organisation continuously learns and becomes a learning organisation. A learning organisation is characterized by the stock of both tacit and explicit knowledge which it has acquired over time and how the stock of knowledge is utilized. The stock of knowledge becomes useful only when it is shared and utilized for the overall improvement in all organisational processes and human capital enhancement.

This conceptual paper suggests that as important as the concept of knowledge management is, rather than treating it as a different management concept, it ought to be treated as a major component of organisational learning process. In fact, knowledge management is and should be an extension of organisational learning because when there is no learning; there will not be any knowledge to manage. This paper also revealed that lack of interpersonal relationship, lack of organisational trust, skills, and time inadequacy are the major factors that hinder organisational members from sharing knowledge.

Keywords: *information; knowledge; organisational resources; competitive advantage; innovativeness.*

I. INTRODUCTION

The management of our stock of knowledge resources or intellectual assets has become a topic that is universally popular to both academicians and practitioners (Koochang, Paliszkievicz, & Gołuchowski, 2017). Little wonder, most contemporary organisations have realized the importance of utilizing knowledge resources, in order to enhance their competitiveness and innovativeness, and have therefore shifted their emphasis to knowledge based systems (Mills, & Smith, 2011). In fact, our dynamic environment, as a prerequisite, requires an increase in corporate capabilities so as to create sustainable competitiveness in organisational processes and performance (Rehman, Asghar, & Ahmad, 2015).

No wonder, Omotayo (2015) has indicated that knowledge management (KM) remains a key to the door of competitive advantage among firms in the same industry because it broadens acquired knowledge by increasing the ability of organizations to be creative, thereby putting them at an advantageous position in

relation to their competitors. Therefore, the only firms that will remain competitive in their dynamic environments are those ones that are outstanding in terms of innovativeness and creativity (Desouza, & Paquette, 2011).

That is why some authors argue that a lot of studies is now carried out with a view to identifying why knowledge acquisition, sharing, and application in organizational settings has rapidly increased from the 1990's, and has remained so (Serenko, Bontis, Booker, Sadeddin, & Hardie, 2010).

To some authors, the term knowledge management is a phenomenon that became popular for a very short while and it is not practically attainable (Wilson, 2002).

Wilson went further to state that he could not formulate a coherent definition of knowledge management, which to him, is quite different from information management. The reason could be that the concept has so many perspectives and no definition can fit into all of these perspectives.

The growth and development of knowledge management as a concept is understandable, considering the history of the concept, which, to me ought to be treated as an offshoot or extension of organisational learning. According to Gurdal and Kumkale (2014), the need for knowledge management is to provide some benefits to the organisation (as cited in Paliszkievicz, Svanadze, & Jikia, 2017).

Although it is relatively recent, its historical development and popularity has helped to throw weight on the importance of intellectual activities over traditional form of resources like land and capital (Spender, 2014). It is no longer strange that knowledge management has now been known to be a source of an organisational competitive advantage, just like the concept of organisational learning. Knowledge management is an extension of organisational learning because an organisation that does not learn can never have any knowledge to store, to share and to use. Knowledge has come to be regarded as an organisational resource that must be managed effectively if an organisation is desirous of standing the pace of competition and environmental dynamism. According to Dalkir (2005) knowledge is now regarded as a commodity or an intellectual asset, but possesses significantly distinct features different from normal commodities, for instance, when individual shares knowledge with

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another person, his stock of knowledge does not deplete, rather, his knowledge base expands.

A very good understanding and appreciation of the fact that information in particular, and knowledge in general has become recognized as veritable organisation assets, has made it imperative for organisations to put a lot of energy in its management. This therefore involves the application of different strategies, policies and tools in the effective management of knowledge as an organisation asset (Barclay, & Murray, 2000). This paper will first of all, establish the meaning of data, information, knowledge and wisdom. Thereafter, we will discuss the link between organisational learning and knowledge management, and also identify some of the reasons why knowledge sharing is not well accepted by some organisational members.

II. DATA-INFORMATION-KNOWLEDGE-WISDOM LINK

The link between data, information, knowledge and wisdom was developed in 1989, by Russel Ackoff (Bernstein, 2009). Through knowledge management system, data can be transformed to information and to knowledge and to wisdom that could help organisations make better decision which will enhance the achievement of their goals. According to Ackoff (1989) "on the average about forty percent of the human mind comprise of data, thirty percent comprise of information, twenty percent consist of knowledge, ten percent consist of understanding, and almost zero consist of wisdom" (as cited in Bernstein, 2009, p. 68).

Data is a simple or mechanical measurement of values, such as age, height, weight etc taken at a particular period of time (Warier, 2003). He further posits that "data is often stored in a database and it is not important to any other person except the person for whom it is meant" (Warier, 2003, p. 3). In order to analyze and process data, meanings must be attached to those discrete values. Data is raw, unprocessed facts that are obtained through the use of measuring instrument. Data may be classified as unprocessed information, no wonder; Ackoff (1989) defines data as figures and facts that are not in any way structured that make no sense on its face value. Some data are structured but they are personalized to the specific needs for which they are collected. That is why it becomes difficult to really distinguish it in very clear terms, from information.

Information means data that have been processed and structured to make it more meaningful and useful to the person that will need it. It is about adding context to discrete data. Information tends to be more refined than data. In other words, what constitutes information to one person may not be information to another person. Information consists of data that have

been processed and has become useful to a user (Warier, 2003). It is therefore, a matter of relevance and meaningfulness. "Information provide answers to questions that begin with such words as who, what, where, when, and how many" (Ackoff 1999, p. 129). The physical conversion of data into information can only be accomplished by humans with the application of information technology apparatus, especially when large amount of data is involved.

Knowledge is the ability to use information in a way that it will enable you to achieve your objectives. According to Kakabadse, Kakabadse and Kouzmin (2003), knowledge and "information" may be assumed to be synonyms; however, it is imperative to distinguish them. In other words, "information is imbedded in the form of theories, processes, or systems" (Omotayo, 2015, p. 3). Epetimehin and Ekundayo (2011) state that knowledge is a non-visible or physical asset, whose acquisition occurs through a convoluted intellectual process of perception, learning, communication, association and reasoning. Knowledge is classified into two: tacit and explicit (Noneka, 1994; Noneka, & Takeuchi, 1995).

Wisdom is the ability to select objectives that are consistent with and supportive of a particular set of values. Wisdom is the application of knowledge for the purpose of achieving a particular objective. Wisdom refers to the capacity to improve effectiveness through the application of mental effort often referred to as judgment. It has the attribute of being personal in nature and it is domiciled in the actor (Rowley, & Richard, 2006).

III. TACIT AND EXPLICIT KNOWLEDGE

According to Baloh, Desouza and Paquette (2011) tacit knowledge is rooted firmly in action, procedures and processes, commitments and values and can only be indirectly accessed.

Explicit knowledge is formalised and systematic. It is codified, collected, stored and easily transmitted from person to person. It is not personally bound and it possesses the qualities of data (Omotayo, 2015).

Explicit knowledge is mostly easily handled in knowledge management software which is effective in handling and facilitating storage, retrieval and modification of documents and texts (Wellman, 2009). Tacit knowledge has to do with intuition and reside in the knower and it is largely experienced based (Nonaka, 1994). According to him, tacit knowledge is action based, very hard to disseminate, and it is highly contextual and personalized. It is also considered the most valuable form of knowledge which most of the time, leads to innovations and breakthroughs (Wellman, 2009). It is embodied in the hearts of the individuals and comprises mental models, values and norms of behaviour.

Knowledge is therefore activated and gained when information is utilized for a new understanding or an insight into the application of new information. KM is “the process of acquiring, sharing, using and managing the knowledge and information of an organisation” (Girard, & Girard, 2015, p. 1). In other words, it has to do with making the optimum application of our intellectual resources in the achievement of group objectives using a multidisciplinary approach. We can therefore define knowledge management as a conscious effort of sourcing for the right knowledge and making it readily available to the right people and helping to distribute and making information actionable in ways that improve organisation capabilities.

When we deliberately study the concept of organizational learning and innovative capability, we discover that it inevitably enhances an organisation’s competitive advantage and its innovative strength. It tells us to focus on improving our learning capabilities both at individual, groups and organisational level, in order to achieve desired level of organizational outcomes, which can be performance enhancement or increase in profitability. (Garcia-Morales, Llorens-Montes, & Verdu-Jover, 2006).

Organizations should endeavour to encourage timely and accurate documentation of our learning and experience and make it accessible for others so that everyone within the organisation will stand to benefit from such experiences. It is only by so doing that the benefit of organisational learning will remain continuous and fruitful (Chawla & Joshi, 2010).

According to Watanabe and Senoo (2010) organizational characteristics and national culture have considerable influence on the practice of knowledge management. Organizational features, such as organisation structure employees’ management relationship and such other characteristics of the organisation influences on the knowledge capabilities of an organisation, which is one of the components of knowledge management.

a) Information Technology and Knowledge Management

Information technology is an essential aid and should never be discarded when we are discussing knowledge management. That is why Ahmad and Schroeder (2011) suggest that the establishment of strategies relating to information technology that are on knowledge-based which will provides employee’s friendly environment that will encourage the refinement of information and transfer of both tacit and explicit knowledge for the benefit of the whole organisation.

b) Organisational Learning and Knowledge Management

According to Singh and Sharma (2011) knowledge management and organisational learning has a positive relationship and by extension, with employee’s performance. In order to improve the employee’s performance, knowledge management

systems must be enhanced and organizations must have to adopt different policies to enhance its learning capabilities.

KM has grown to be an important concept that is why the concept has gained considerable attention from scholars, practitioners, and policy-makers (Spender, 1996; Nissen, 1998; Pirro, Mastroianni, & Talia, 2010). It is on that basis that organisations are now paying special attention to their stock of both tacit and explicit knowledge. Knowledge is no longer regarded as a freelance source of organisational competence.

c) Factors that influence Knowledge Management

The three most important factors that influence the management of knowledge are knowledge distribution, organizational change and organizational learning (Danish, Nawaz, & Munir, (2012).

Knowledge sharing is an integral part or stage in the KM process. When intellectual assets are stored in archives via documents, procedural manuals, work processes and so on, without sharing, it is of no value. It is only when we share valuable information to those that need them, that we can be said to have engaged in meaningful knowledge management process. It does not end there too, because knowledge that is shared without the practical application or utilization by the receiver is of no benefit to anyone.

Organisations do not change for nothing. There are indeed a lot of reasons why organisations change. It could be a planned or anticipated change, arising from executive or managerial game plan to restructure in order to capture a new market opportunity. Or it could be caused by a reaction by a competitor’s action. In other words, an organization may be acting in such a way to counter a competitive maneuver. Whichever one it is, it is very important for organisations to be current in terms of knowledge creation, storing, sharing and utilization in order to cope with any of such challenges (Danish, Nawaz, & Munir, (2012).

The major components on interest in organisational learning are knowledge acquisition, knowledge sharing and knowledge utilization (Warier, 2003). Interestingly, this corresponds also to most definitions of knowledge management given by acclaimed scholars and practitioners. When an organisation learns and keeps stock of what it has learned through individual, groups and organisational level interactions, it is said to be a learning organisation (Watanabe, & Senoo, 2010). Learning organisations keep stock of knowledge and use old knowledge as a basis of acquiring new insight in knowledge creation. They discard outdated knowledge and ensure that knowledge is given to every member of the organisation that requires it. In other words, learning organisations are those organisations that are visibly able to manage the knowledge that they have acquired over time.

Knowledge management focuses on gathering, organising and analyzing the knowledge base of individuals and groups across the organisation in a way that an organisation can benefit through enhanced organisational performance (Wellman, 2009). Many organizations devote a lot of attention to the system of transferring best practices, experiences and knowledge as well as increasing the knowledge base of their organisations.

Knowledge management is the product of tacit knowledge or what may be called undocumented ideas or experience and explicit knowledge that are captured in documents as information. It is from the knowledge management information base that knowledge that is stored, is shared between individuals, teams as well as the whole organisation.

Knowledge management is not limited to information creation and storage, because information that is stored needs to undergo certain processes before they can be shared or utilized. According to Ries and Trout, (1986), the processes include:

Assimilation: This is the process of converting stored data into scientific knowledge through validation and analysis.

Data Compaction: This is the process of refinement whereby information that appears irrelevant is discarded.

Data Substitution: This allows information users to systematically access large arrays of information through the logical representation of developed formats that stands for the original documents.

Repackaging: This is the actual development of the material required for public utilization.

These processes are all embedded in knowledge management perspectives as postulated by Ries and Trout, (1986).

IV. KNOWLEDGE RE-USE

According to Marcus (2001) there are three roles in the reuse of knowledge.

Firstly, the originator of the knowledge, secondly, knowledge intermediate, that is the person that packages the information for storage, sharing and into its usable form. It has to do with indexing, publishing, mapping and standardization, and finally, the consumer of the knowledge, that is the person or persons that will use the knowledge in question.

Demian and Fruchter (2000) identified two types of knowledge re-use, namely internal and external. Internal has to do with a producer or originator of the message using his own knowledge at some future time. External has to do with when the knowledge consumer uses someone else's knowledge.

V. BARRIERS TO KNOWLEDGE MANAGEMENT

Technological barrier: There is often unavailability of software and hardware, coupled with

inadequate IT manpower to handle the software, even when it is available. Furthermore, a firm can be caught up in a technological trap caught up by the difference between the time a technology is acquired and the time it is utilized (Herrmann, 2011).

In Africa, for instance many people are comfortable working with mobile phones compared to laptop computers. According to Kelly (2011) most Africans regard mobile phones as their personal computers.

Content barrier: A lot of innate skills and creativity is required to be able to transform tacit knowledge into explicit knowledge. Some ICT apparatus and processes are not easy to explain. This therefore acts as an impediment to knowledge sharing. Example could include unauthorized exchange of information through software within the organisation (Herrmann, 2011).

Barriers in Routines and Procedures: Some processes and procedures are not practically applicable in all situations, for instance regular sectional review. Furthermore, most other procedures, like HR manuals are not rigidly followed because they are cumbersome and mostly prepared by external consultants. Some routines like every midday joint coffee breaks among staff may not be recognized or strictly followed by all employees, which makes them unreliable.

Barriers in Organisation: An organisation executive may create an organisational structure that is favourable to him alone and which coincidentally facilitate the sharing of knowledge without having the interest of the organisation at heart. This may hinder knowledge management because other employees are not carried along in the design of such an organisational structure, but even at that, "structures are multi-layered, polyvalent, and often contradictory and maybe invisible even to those who inhabit them" (Ferguson, 1990, p. 17).

Barriers in Personnel: Individual behaviour characteristics account for most of the challenges encountered in the course of managing human resources as a major organisational asset. For example, for effective management of organisational intellectual resource, individuals in the organisation must view knowledge as crucial capability of their organisation; otherwise it will be extremely difficult for organisation to develop the intellectual competencies of the workers. Secondly, if the structure of the organisation is not innovation friendly, knowledge management is bound to fail (Dalkir, 2005).

Inadequate skills in the use technology can be corrected through effective training and the provision of useable technology. Furthermore, there should be all round discussions on the subject matter of knowledge management in order to create awareness among organisational members. Also, organisational members must be encouraged to share information with other

organisational members especially in areas of their core competencies by creating personnel incentives.

Spuela, and Kovac (2017) investigated the factors that promote organisational knowledge sharing and their findings show that personal inclinations, technology and organizational variables are factors that help in predicting an organisation's knowledge sharing orientations. It is very important to note that it is not the quantum of intellectual assets that an organization has that matters, but what is paramount is how the knowledge is shared to bring about optimum utilization of the knowledge (Argote & Ingram, 2000).

The process of knowledge sharing is very important when one considers the fact that knowledge sharing among employees in the same department makes it possible for organisational members to meet their individual goals and objectives faster and also make it easy for them to come up with innovative solutions to their problems (Demartini, & Paoloni, 2013).

In fact, a renowned author asserts that knowledge sharing is very important to organisations because of the following reasons: reduction in cost of operation, speed in meeting production targets, increase in efficiency and effectiveness, increase in innovation, and increase in organisational bottom-line (Hansen, 2002).

However, even with all the supports and encomiums given to knowledge management as a discipline, Barson, Foster, Struck, Ratchev, Pawar, Weber, and Wunram, (2000) argues that knowledge sharing has its own weakness, because according to them, some organizations do not have a culture that permits the distribution of knowledge. For example, Hendriks (1999) note that most knowledge are designed specifically for a particular organisational setting which make such knowledge valueless for other organisations, even when it is made available to them.

There are several other individual factors, for example, lack of interpersonal relationship, lack of organisational trust, skills, and time inadequacy as well as organisational level factors that might hinder organisational members from distributing or sharing knowledge (Lee, & Al-Hawamdeh, 2002).

More importantly, research has also shown that the type of leadership an organisation has, interpersonal helping, and own self-efficacy increases the desire and/or intention to share knowledge (Lin, 2008). The correlation between organisational culture and knowledge sharing is indeed an obvious one because an encouraging environment with shared core norms and value orientation might be positively related to increased knowledge sharing among employees in the sense that knowledge distribution practices more often than not, underlie an organisation's cultural expectations (Zheng, & Fai, 2013).

Another very important factor to consider in discussing organisation knowledge sharing is the

concept of organisational trust. Organisational trust represents more specific factor that explains the extent to which an individual believes that sharing knowledge among his or her co-workers will be to the best interest of the organization (Ismail & Yusof, 2008).

VI. SUMMARY AND CONCLUSION

Knowledge management has gained popularity as a management concept with a lot to benefit by organisations that share and utilize knowledge as an intellectual resource. However, knowledge management ought to be treated as the last component of organisational learning, since the goal of the two concepts are technically and fundamentally the same.

The relationship among data, information, wisdom and knowledge was highlighted, with wisdom being at the topmost of the pyramidal shaped interrelationship.

The four components of knowledge management: knowledge acquisition, knowledge storing, knowledge sharing and knowledge utilization was discussed. The problems of sharing knowledge were also reviewed. Knowledge is of two types: tacit and explicit knowledge. Tacit knowledge is embodied in the minds of the individuals and it comprises beliefs, mental models, values and norms of behaviour. Explicit knowledge is codified in the form of document, processes, procedure and manual and is very easy to share.

Lack of interpersonal relationship, lack of organisational trust, skills, and time inadequacy as well as organisational level are the factors that might hinder organisational members from distributing or sharing knowledge.

However, knowledge sharing has its own weakness, because some organizations do not have a culture that permits the distribution of knowledge and even the ones that have the sharing culture do not know how to share knowledge in an effective manner.

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Service Quality Gap and its Impact on the Performance of Indian Health Insurance Companies

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Abstract- This manuscript presents mixed research paradigm based empirical assessment of the Service Quality Gap (SQG) in Indian Health Insurance Companies (HICs) and its impact on the firm's performance. This study applied SERVQUAL model with seven dimensions, Reliability, Tangibles, Responsiveness, Empathy, Assurance, Credibility, and Competency to perform SQG assessment. Being empirical study responses from HIC customers belonging to the different demographic constructs have been examined for consumer's expectation and perceived service quality. This empirical study revealed that there is negative SQG (-1.53) in reliability that motivates HICs to focus on facilitating promised services to retain customer's confidence. The SQG values in other dimensions like tangibility (1.7), assurance (1.61), responsiveness (1.52), empathy (1.56), credibility (1.97), and competency (1.44) too signify quality gap in current services. It has been found that customers feel that HICs are emphasizing on tangibility and credibility dimensions to meet fundamental need of health insurance. SQGs obtained indicate towards more productive and augmented quality enriched provision like cash withdraw machinery such as ATM, claim provision through ATM, notification through mails, electronic CRM (e-CRM) facilities. It also reveals that HICs must be willing to help customers and must answer them promptly with effective communication and solution. Empathy dimension reflects maximum quality gap that demands HICs to let consumer access major facilities to promote satisfaction and productivity.

Keywords: indian health insurance companies, service quality gap, firm performance.

GJMBR-A Classification: JEL Code: M10



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Service Quality Gap and its Impact on the Performance of Indian Health Insurance Companies

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Abstract- This manuscript presents mixed research paradigm based empirical assessment of the Service Quality Gap (SQG) in Indian Health Insurance Companies (HICs) and its impact on the firm's performance. This study applied SERVQUAL model with seven dimensions, Reliability, Tangibles, Responsiveness, Empathy, Assurance, Credibility, and Competency to perform SQG assessment. Being empirical study responses from HIC customers belonging to the different demographic constructs have been examined for consumer's expectation and perceived service quality. This empirical study revealed that there is negative SQG (-1.53) in reliability that motivates HICs to focus on facilitating promised services to retain customer's confidence. The SQG values in other dimensions like tangibility (1.7), assurance (1.61), responsiveness (1.52), empathy (1.56), credibility (1.97), and competency (1.44) too signify quality gap in current services. It has been found that customers feel that HICs are emphasizing on tangibility and credibility dimensions to meet fundamental need of health insurance. SQGs obtained indicate towards more productive and augmented quality enriched provision like cash withdraw machinery such as ATM, claim provision through ATM, notification through mails, electronic CRM (e-CRM) facilities. It also reveals that HICs must be willing to help customers and must answer them promptly with effective communication and solution. Empathy dimension reflects maximum quality gap that demands HICs to let consumer access major facilities to promote satisfaction and productivity. Credibility attribute affirm that the HICs meet major expectations; however, the other dimensions too required for customer satisfaction that eventually could lead higher retention and augmented firm's performance. The Pearson correlation based hypothesis test affirms the relationship between SQG and firm's performance and therefore HICs require emphasizing on fulfilling consumer's expectations to gain more customer acquisition, higher retention and competitive advantages.

Keywords: indian health insurance companies, service quality gap, firm performance.

1. INTRODUCTION

In last few years, Indian economy has shown tremendous growth even under dynamic and fluctuation national-international markets. The stability of its economy even under turbulent conditions establishes and affirms that hypothesis that a large

market, demanding and potential youth population and optimistic economic revitalization do assure stable economic growth of any economy. Such stable economic growth of Indian economy has established it as front runner globally and consequently has attracted major companies and financial institutions to invest in India. Undeniably, the foundation of Indian economic growth can be found rooted from the years of the economic liberalization that incepted in 1990s. Economic liberalization enabled Indian economy to explore major opportunities by means of attracting external investment, foreign direct investment (FDI), parallelized "Made in India" conception, etc. Additionally, being the world's second largest market place, India has always been a destination for business houses, where companies have been making effort to explore different opportunities. Amongst major industries, financial institution has always been the backbone of socio-economic development of any economy. Different types of financial institutions including core banking, insurance companies etc have been playing significant role towards rising economic growth of India. The countries, especially the developing economy or the countries where prime emphasis is made on education, public healthcare, skill development and job oriented practices to strengthen its human resources, could generate rising economic development and high pace decrease in poverty' (WDR, 2007). Undeniably, for any economy the significance of its human resources is non-substitutable and therefore to keep its resources revitalized facilitating optimal living standards, socio-economic balance and sound ambiance, economic support etc are of paramount significance. Amongst major economic activities, insurance sector has grown well in last few years. Rising economic prosperity, employment, purchasing capacity etc have revitalized insurance sector to explore more and more opportunities. Undeniably, insurance plays a vital role in numerous activities pertaining to the economic development. Insurance deal with transferring certain type of risk such as natural disaster, physical damage, accident caused damage, theft, health limitations such as short or long term, illness etc from one person or a group to relatively more financially stable in exchange for a payment. An optimistic and well defined risk pricing and financial scheduling can be of

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paramount significance for an individual, which is being applied as a potential tool by insurance companies to attract more customers and serve insurance services like health insurance or life insurance.

Recalling a common hypothesis stating “healthy mind always exists in a healthy body”, the need of health insurance becomes more convincing as it the provision of the health insurance makes it inevitable to ensure risk-free health status and financial support during health problems or related job losses. Irrespective of the personal care made, human gets illness and suffers numerous health issues. On the other hand, the cost of health treatment and medical cost has increased many folds, as the illness or diseases are increasing; the cost of treatment also increasing gigantically. One of the predominant solutions for it is to have certain health insurance policy, which is globally acknowledged approach for supporting health care requirements individually as he/she had to make small but steady contribution as installments (say, premium) and can come out from all health issues and associated worries. In last few years the exponentially rising living culture and associated demands have been a vital that makes human life more stressed and worried. Under such circumstances the assurance of financial support when needed can of paramount significance. It motivates people to go for health insurance. Health insurance signifies a type of insurance that supports for almost complete or even a fraction of person’s health care needs, primarily (medical expenditure) bills to be paid. It may be called as “a form of insurance whose payment is conditional on certain insured incurring supplementary expenses or losing personal income due to inability caused from health issues or illness” (Phillip 2007). In other manner, health insurance can be stated as a type of parallel or supplementary arrangement that assist for deferring, delaying, reducing or as cumulatively avoiding payment of health care incurred by an individual or group. It has also been stated as the disability insurance availed towards medical expenses during sickness or injury. In fact, health insurance has become an indispensable need of human life primarily because of unpredictable characteristics of the expenses on healthcare. Though, every individual have certain idea about their requirement for future medical needs, the definite amount that they use on healthcare often remains indefinite and uncertain. Usually, an argument that shorter the time period, higher the percentage discrepancy in healthcare expenses among individuals. As the time period becomes longer the disparity reduces little but significantly. In such scenarios, exploring over decades it has been found that these exists significantly higher skewness for healthcare expenditures (Eichner 1998; Berk et al., 2001). Exploring in depth it can be found that the approach of risk pooling has been followed since Vedic times whose proofs could be found in numerous manuscripts such

as Manusmriti, Dharmasastra and Arthasastra (Siddaiah, 2011). A recent study (IRDA, 2010) revealed that almost 75% of health related expenditures fulfilled by an individual’s personal savings through certain financial lending process that imposes long term financial indebtedness. In present day condition, health insurance is no longer a matter of luxury for the major part of Indian population, but it has become an inevitable need. One of the possible ways to augment healthcare provisions is by providing health insurance benefit in such a manner that it fulfills the need of mass. Considering India as a gigantic market place for insurance services, a number of companies have started providing health insurance where to achieve more customer acquisition different services and products are being facilitated at competitive cost and flexibility.

As stated, in last few years a number of Health Insurance Companies (HICs) have come into existence that as a result have given rise to a competitive scenario for stakeholders including both HICs as well as customers, where the later has the opportunity to identify the best HIC and associated policy to meet personal needs. Undeniably, in selecting any product or service, the Quality of Service (QoS) plays decisive role. Customers make their buying decision and preferences based on the service quality being provided by the company. With reference to certain expectations a customer assesses the extent to which the company (here, HICs) is providing services and based on satisfaction it makes further purchase decision or service continuation (Al-Rousan & Mohamed, 2010). Under such circumstances, it becomes inevitable for HICs to assess the level of satisfaction among its customers. Identifying Service Quality Gap (SQG) can play vital role in augmenting the QoS delivery that as a result could help in better customer acquisition and long term retention to enhance firm’s performance. In majority of literatures, it has been found that SQG has direct relationship with the firm’s performance. The assessment of various service quality factors and current SQG can be vital to make optimistic service policies and optimal practices. This is the matter of fact that in last few years a few, but very constrained studies have been made towards assessing service quality gap in health insurance companies. This paper intends to explore the impact of the service quality gap on the performance of Indian HICs, as per present knowledge not much significant study has been made so far for service quality gap and its impact on Indian HICs. This vacuum motivates to perform an in depth study and analysis for the aforementioned research topic. With this motivation, in this manuscript an empirical or analytical study has been performed to assess SQG in Indian HICs. Being a mixed research paradigm based study, this research work exploits both theoretical (i.e., existing literatures) as well as empirical analysis approach to

assess different SQG artefacts or attributes and respective satisfaction.

The other parts of the presented manuscript are divided into following sections. Section II discusses literature survey followed by the discussion of the research methodology in Section III. Section IV discusses the data analysis and the overall research conclusion is presented in Section V. The references used in this manuscript are given at the end of the manuscript.

II. LITERATURES SURVEY

This section primarily discusses some of the key literatures pertaining to Health Insurance in India and SQG in HICs etc.

a) *Health Insurance Studies in India*

Undeniably, in the world of uncertainty health insurance has become one of the inevitable needs of human being. The economic development and upsurge in individual's purchase capacity has revitalized insurance companies to provide better and competitive solution. Ahuja (2004) focused on quality being provided to the customer by health insurance companies, where considering demographic difference author focused on HIC services provided particularly to the poor community. Additionally, they focused on the different paradigms being applied to augment insurance facilities for the poor fraction of Indian society. They found that community based health insurance (CBHI) can play vital role; however service oriented deliverables optimization is must. A similar study was done by Devadasan et al. (2004) who revealed the predominant models of CBHI primarily depend on the insurer and the key intricacy towards developing CBI approaches is to financial stability and sustainability. Jajoo et al. (2004) performed a case study of health insurance being provided in Maharashtra, an Indian state. Authors assessed services being provided by Jowar a micro health insurance scheme. Authors found that though efforts are being made, there is the need of balance in between services provided, poor's requirements and insurance cost. Ahuja et al. (2005) studied the existing forms and emerging trends in health insurance in India. They focused primarily on low income people of India, where they found that the majority of schemes have significant scope for further development by facilitating optimal incentives to motivate customers for health insurance. It signifies service quality gap in existing health insurance policies. However, in last one decade scenarios are changed significantly and due to competitive market condition HICs have been provided better services with more lucrative offers. Gupta et al. (2005) assessed the approach of social health insurance and its extent of development in Indian economy. For a case study, they studied social health insurance- Employee State Insurance Scheme (ESIS) and found that despite of

government efforts on health policy, the health sector is presently manipulating dimension primarily because of market forces. Studies have revealed that in health insurance claim process is highly intricate (Anchan, S. et al., 2011). To assess the same, Anchan, S. et al. (2011) studied the significant factors affecting claim process and related consumer satisfaction. Authors found that a major section of policyholders were not even completely aware about health insurance facilities and associated conditions or availabilities. Approximate 50% of the policyholders knew about a third party authorization. However, overall results signified that the consumers were not completely satisfied with existing health insurance practices and delivery. Mahal (2003) studied the impact of the liberalization and the emergence of private sector HICs in Indian health insurance sector. Authors found that that is a very small redistributive influence, when richer communities have privileged access and availability to use major public provisions and facilities.

b) *Service Quality in Health Insurance*

Nirjhar (2005) studied health insurance services being provided by public sector as well as private sector companies. In a case study of West Bengal, authors found that the Private Insurers have accomplished a significant fraction of market share by retrieving approximate 25% of the market share, while the similar fraction is held by public sector insurers. Nalini et al. (2007) studied operational policies, various operating practices and problems associated with the insurance businesses under dynamic and moving trends in the business sector. Authors stated that to cope up with the fast changing market trends and competition, a service provider requires assessing service quality and customer's perception so as to meet their expectations. Rao (2007) found that the current insurance sector demands optimal strategies for sustainability and increasing growth in highly competitive market to meet customer's demands while maintaining optimal balance between cost of service and benefits. Sabera (2007) concluded that the move of private financial players played vital role in expanding and retaining the processes in the Indian insurance sector that as a result assisted in redefining and restructuring the public sector financial processes. Vikash (2011) studied on the research title "Service Quality Perception of Customers about Insurance Companies", where they applied SERVQUAL/SERVPERF model. Authors examined health insurance services being provided by public sector as well as private sector companies and found that private sector companies have been provided more competitive services than public sector. Bansal (2011) focused on service quality in Indian and Chinese service sector and did a comparative analysis between Indian and Chinese Customers." Researchers found that even though both the countries are providing similar service and in similar

operational environment, however there exist gap in the service quality components. Despite of the varying operational environment, major fraction of customers still believes personal and customized support as the decisive factor to make buying decision. Sahar et al. (2012) studied SQG using SERVQUAL model and found that there is SQG in customer's expectation and the deliveries being done.

The detailed discussion of the customer's satisfaction towards health insurance services is given in ascending sections.

i. *Customer Satisfaction: A Measurement of Quality of Health Insurance Services*

Gupta (2002) examined whether individuals and households are ready to take a part in private sector health insurance facilities. Their study revealed that though there is the willingness among customers to buy health insurance products or services, which is more revitalized because of low income and uncertain health conditions. Authors found that the major middle class families are willing to have health insurance. Mahal (2003) examined the impact of the liberalization and particularly the entry of private insurance companies in Indian health insurance sector and on the allocation of public health subsidies in India. Authors revealed that there is a very small redistributive influence, when richer communities have privileged access and availability to use major public provisions and facilities. Matthies et al. (2004) studied different issues in the health insurance services in India. They found that facilitating sufficient consumer protection which could be formed by means of the legal regulatory models and rules can play vital role in increasing businesses and competitive advantages for all associated stakeholders. Authors found that the existing policies and regulation require calibration and enrichment to promote the development of health insurance market. Sekhri et al. (2004) in their research assessed various health insurance practices globally and to motivate policymakers to augment deliverables. Authors exhibited that the private health insurance better than the major public sector policies because of competitive facilities with flexible claim process. However, public sector health insurance is cost effective. Ahuja et al. (2004) stated that the insurance services are confined till the upper society however a mass population is still deprived of it. Authors recommended that, to form demand for health insurance it is inevitable to consider the demand side more seriously while maintain or introducing optimal policy, schemes to fulfill poor's demands. Mudgal et al. (2005) studied whether expenditure of households in rural India is insured against any medical ailments. They found that with the exemption of certain definite locations and a few section of scheduled tribes (ST) households, in Indian community the villagers are capable of insuring their consumption against any medical ailment hazardous. However, villagers are not

completely capable to sharing the risk of all such hazardous. Dror (2007) investigated the "one-size-fits-all" health insurance products and stated that these type products are not universal to be used in Indian economy, especially for the low income people. Authors hypothesized that the health insurance schemes must be taking care of the optimal balance between consumer's requirements towards health care, health insurance demands and the supply of health care. They found there is the variability to pay for health insurance. Authors stated that such variability is mainly because of the income differences, illness proneness or frequency, quality and proximity of the service provider, preference towards specific health insurance company's type (public or private). Danis et al. (2007) focused on assessing different approaches of health insurance provision. Additionally, authors tried to understand the decision variables that a customer applies to make its health insurance purchase decision. Based on research outcomes, they derived a model called Choosing Health Plan All Together (CHAT) for better health insurance services. Authors revealed that there is the gap between customer's expectation and the service being provided. They suggested for enabling people a better health insurance service with high claim amount and low premium that could be suitable for middle income or rural areas. Joglekar (2008) assessed the influence of the health insurance on various catastrophic out-of-pocket (OOP) health expenditure and did a case study for India. They stated that any expenditure on health can be catastrophic for household who survives below certain poverty level and are not able to avail the sustainable consumption level. Vellakkal (2009) examined the key factors influencing customer's buying behavior or health insurance. Authors studied different pre-conditions and information exchange by HIC's representative or agents that could have impact on the buying behavior of the customers. Authors found the precise information exchange and ambiguous-free pre-conditions is must for customer retention and acquisition. Furthermore, author suggested to enhance trade-off between policies, cost and market conditions to promote health insurance sells.

III. RESEARCH METHODOLOGY

This section primarily discusses the research methodology applied for the presented study. Predominantly, this section of the presented manuscript depicts the research objectives, research hypothesis, population, sampling technique and tools applied.

a) *Research Objectives*

The overall research objectives of this research work are:

1. To assess service quality gap in Indian HICs.
2. To study and analyze SQGs in Indian Public sector and Private sector HICs.

3. To assess the impact of SQG on the performance of Indian listed HICs.
4. To identify key service quality artifacts or attribute to be augmented for better HIC's performance.

b) *Research Hypothesis*

The proposed research work intends to assess SQG in Indian HICs and the relationship between different service quality indices (i.e., reliability, tangible assets, responsiveness, empathy, assurance and credibility etc) and the firm's performance. With this motivation, in this study we have performed correlation analysis between firm's performance and SQG parameters. Based on this conception, a few hypotheses are formulated. The hypotheses derived are given as follows:

- *H01*: Customer expectations of Reliability factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H02*: Customer expectations of Tangibles factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H03*: Customer expectations of Responsiveness factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H04*: Customer expectations of Empathy factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H05*: Customer expectations of Assurance factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H06*: Customer expectations of credibility factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H07*: Customer expectations of competency factors are higher than the perceived quality of health insurance delivery by Indian HICs.
- *H08*: The existing SQG in Indian HICs service delivery affects firm's performance.

c) *Research Design*

Considering overall research objectives, in this study the mixed research paradigm has been applied that embodies both qualitative as well as quantitative research methods. This study applies qualitative method as it enables answering the related questions like why, how and in what way. Primarily, qualitative study performs secondary data based study where different literatures and existing articles are studied and explored to find out answers for the basic questions pertaining to the overall research objectives. On the contrary, quantitative research methodology applies empirical or analytical method to examine primary data collected from the respondents using certain statistical tool. Considering quantitative research paradigm, at first research questionnaire has been prepared to collect

consumer's response towards their expectations and the quality perceived by HICs. Here, the responses are collected for different SERVQUAL model attributes such as reliability, tangible assets, responsiveness, empathy, assurance and credibility. Based on research questionnaires, the service quality in public sector as well as private sector HICs have been obtained by means of semi-structured interview. Considering customers with different demographic constraints, random sample selection was performed. The interviews were made with the people or customers at different locations such as hospitals, banks and different public gathering places to assess current SQG in Indian HIC's service delivery. To examine SQG, SERVEQUAL model has been considered. Unlike traditional five parameters based SERVQUAL (Parsuraman, 1985), in this study a modified model with seven attributes has been taken into consideration to assess the differences between customers' preference dimension and the services being provided by financial institutions. Estimating the customers' expectations (E) and quality perceptions (P) from the (h) dimensions (here, seven), the Service Quality Gap (SQG) has been obtained. The difference of quality gap (i.e., E-P) is obtained as

$$G_h = E_h - P_h$$

Once estimating the gap SQG is obtained as:

$$SQG_j = \frac{\sum_{i=1}^{n_j} (E_{ij} - P_{ij})}{n_j}$$

Where,

SQ_j : Signifies the QoS in j dimension,

E_{ij} : Signifies the expectation from the organization for i variable in the j dimension.

P_{ij} : Represents the perceived performance from organization for variable i in the j dimension.

n_j : States for the total number of variables of j dimension.

d) *Research Population and Sampling*

In this study, a total of 600 respondents are selected for semi-structured interviews and data collection. Considering accessibility to reach respondents and their respective affinity towards responding research questionnaire, the selection of geographical locations has been done. The respondents have been randomly selected from Bangalore, Karnataka, India, Mumbai (financial capital of India), Pune (Maharashtra) and Mysore (Karnataka), Lucknow (Utter Pradesh) and Jaipur (Rajasthan) etc. In this study a total of 600 respondents have been interviewed. Here, random cum convenience sampling approach was applied due to its suitability when data is collected from different geographical locations and respondents with different demographic background. Additionally, this approach enables random respondent selection (based on request) and collecting their views

(if willing) or perception about the service quality being delivered by HICs. To assure generalization of the research outcome, respondents from different geographic and demographic background are considered for data collection. The period of data collection for summarizing and analyzing the data was the first of December 2015 to first of December 2016 so it has been taken one year.

e) Data Collection

As stated in previous section, in this study responses have been collected from the respondents belonging to the different socio-economic or demographic background. To ensure results

generalization, the respondents from different demographic backgrounds and different HICs, including public sector as well as private sector HICs are selected. To diversify the research outcome, respondents from across India have been considered for interview; however considering ease of data collection, respondents from key capital cities such as Bangalore, Mysore, Chennai Mumbai, Pune, Delhi, Chandigarh, Lucknow and Jaipur were interviewed. A snippet of the respondents' selection from different HICs is given as follows:

Table 1: Respondents from Health Insurance Companies

Health Insurance Companies	Frequency	Percentage (%)
Religare Health Insurance	61	10.2
ICICI Lombard General Insurance	57	9.5
Apollo Munich	52	8.7
Max Bupa	48	8.0
Bajaj Allianz	58	9.7
HDFC Ergo	55	9.2
Birla Sun life	41	6.8
Reliance General Insurance	45	7.5
Star Health Insurance	35	5.8
SBI- Smart Health insurance	38	6.3
National Insurance Co. Limited	51	8.5
United India Insurance Co. Limited	59	9.8

**Source: Primary Data*

To collect responses, each respondent was asked questionnaires pertaining to SQG in current HICs operating in India. Being a modified SERVQUAL based study, different questions related to reliability, tangibility, assurance, empathy, credibility, responsiveness etc were asked from the respondents through semi-structured interview. The overall questionnaires were split into two broad categories; demographic questionnaire and descriptive questionnaire. Here, demographic questionnaire intended to assess personal constructs and response-ability of the respondents, while descriptive questionnaires were designed to collect research hypothesis or SQG related questions. The descriptive questions were collected using 5 point Likert's scale.

f) Data Analysis

This section primarily discusses the statistical inferences of the collected responses pertaining to the SQG in Indian HICs. The questionnaires have been pre-coded so as to enable efficient, analysis and respective tabulation has been done. To perform data analysis the sampled data are processed using a standard statistical tool named Statistical Package for Social Science (SPSS). To perform results assessment different tools or parameters including, mean, medium, Cronbach Alpha, paired sample t-test and Pearson correlation test etc

have been performed. The following sub-sections briefs about the demographic analysis and the descriptive analysis for the collected data.

g) Demographic Analysis

This section primarily depicts the statistical analysis and inferences about the demographic variables and respective significances. Obtaining a total of 607 responses, at first outlier analysis was done that revealed missing elements in total of 7 responses. The total of 600 responses was taken for further study. To assess respondent's demographic constructs, we have examined different personal constructs such as respondent's gender, age, education, income, perception towards health insurance and purchase decision variable etc. The following section briefs the statistics of these research variables.

- Gender Distribution

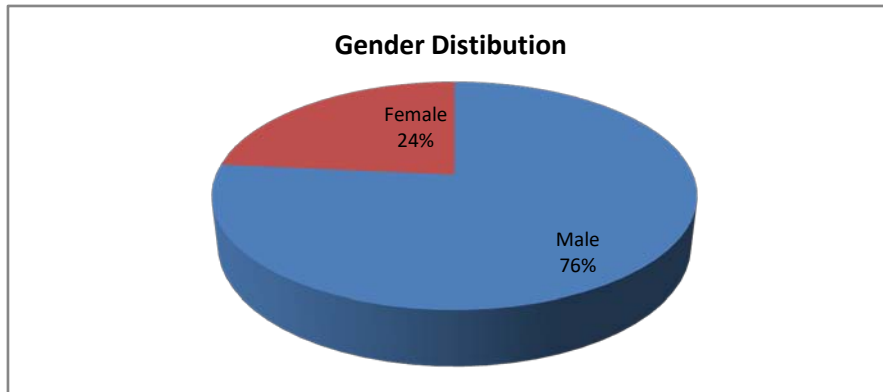


Figure 1: Gender Distribution of Respondents

The depiction based on gender is important because in present day scenarios, males and females have the equal contribution towards any economy. However, based on individual priority, responsibility etc, the purchase decision varies. Males, who are expected to have more responsibility, are usually inclined towards

supplementary economic support such as health insurance in hard time. The response collected has revealed that a total of 75.8% respondents (460 out of 600), were male while 23.3% respondents were female (140 out of 600).

- Age Distribution of the Respondents

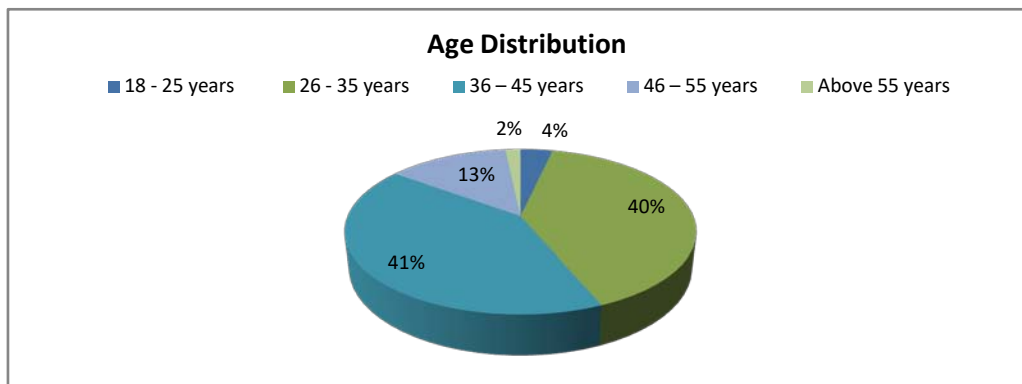


Figure 2: Age Distribution of the Respondents

The age of a human being is directly related to its maturity to respond and make decisions. Among the considered respondents 21 (3.5%) were in the age range of 18-25 years, 241 (40.2%) were in the range of 26-35 years, 249 respondents (41.5%) were in the age

range of 36 to 45 years. 79 (13.1%) are in between 46 to 55 years of age and 10(1.7%) are above 55 years, stating that a major section of the respondents do belong to the economically active population.

- Educational Background of the Respondents

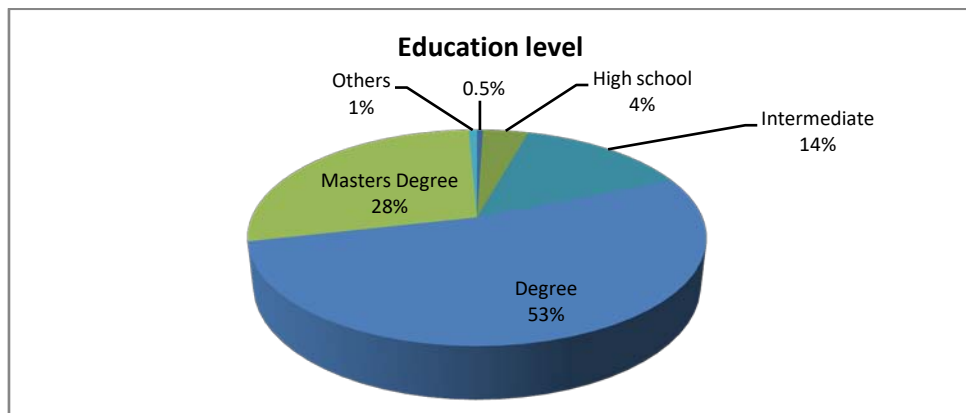


Figure 3: Education Levels of the Respondents

Similar to the age, education is the key factor that impacts one's ability to respond and make decision. A total of 317 (52.8%) respondents were bachelor degree holder, while post graduate respondents were counted as 166 (counting 27.7% of the total respondents). On the other hand, only three

respondents were found illiterate (0.5%). 87 out of 600 respondents were having intermediate education (14.5%). 3.8% (23 out of 600) having high school education. The remaining 0.7% (4 out of 600) respondents are others.

- *Occupation of the Respondents*

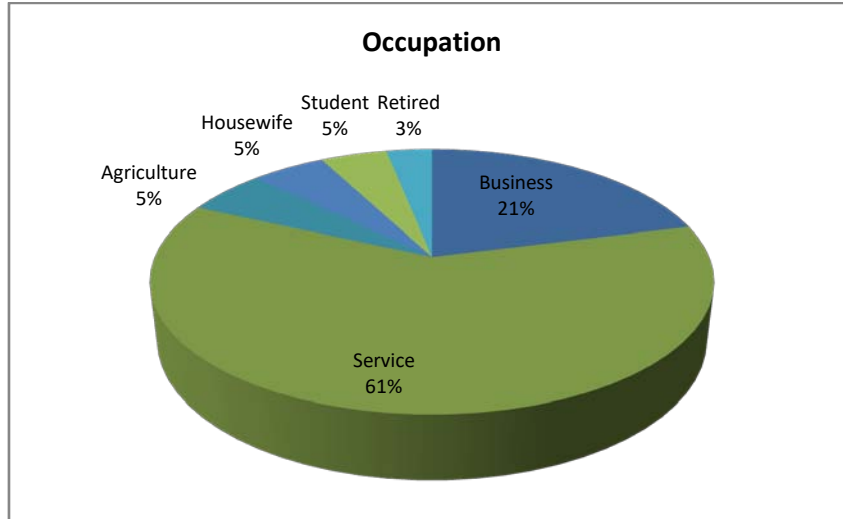


Figure 4: Occupations of the Respondents

Undeniably, the occupation of an individual reflects (its) buying capability or the ability to make certain purchase decision. In this study a total of 21% respondents (126 out of 600) were business man/women, a total of 60.8% respondents (365 out of 600) were working in certain public or private services.

On the contrary, the data also reveals that 5.5% of respondents (33 out of 600) were involved in agricultural activities, while 5% (30 out of 600) of respondents, especially female were housewife. Approximate 4.5% (27 out of 600) respondents were students and 3.2% (19 out of 600) were retired persons.

- *Marital Status of the Respondents*

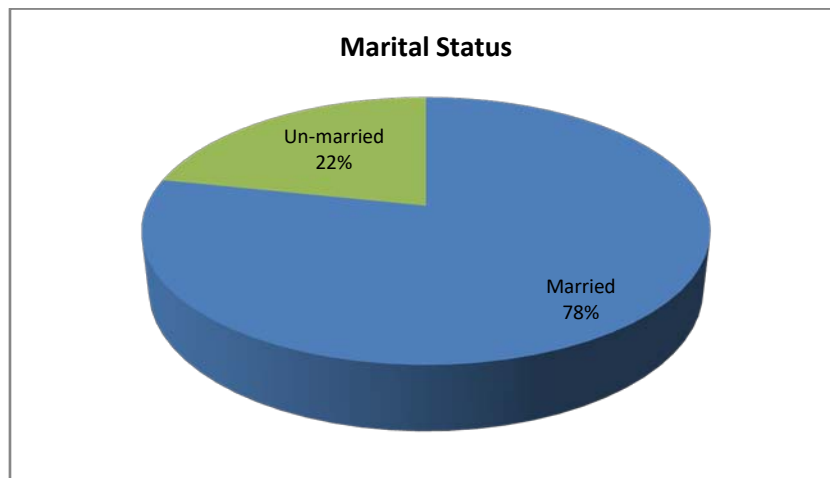


Figure 5: Marital Status of the Respondents

No doubt, marriage comes with the sense of responsibility and hence the assessment in terms of marital status can be of paramount significance. Among the respondents 78.5% (471 out of 600) were married, while the remaining 21.5% (129 out of 600) respondents were unmarried.

• Profession of the Respondents

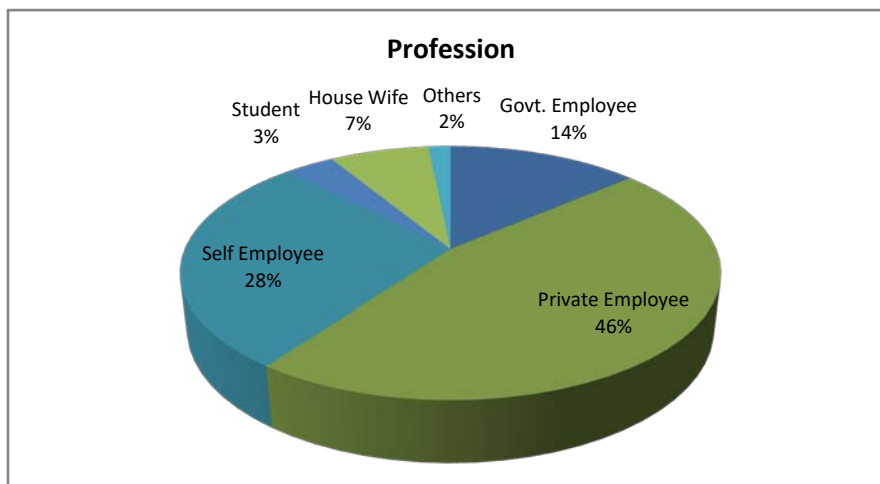


Figure 6: Professions of the Respondents

Considering the profession of the respondents, 13.8% (83 out of 600) were government employees; followed by 46.2% (277 out of 600) who were working in certain private firms. The total of 27.8% (167 out of 600) respondents was self-employed, 3.5% (21 out of 600)

were students, while, and 7.0 % (42 out of 600) were engaged in home activities (housewife). The remaining 1.7% of the respondents (10 out of 600) was retired persons or part time workers.

• Income of the Respondents

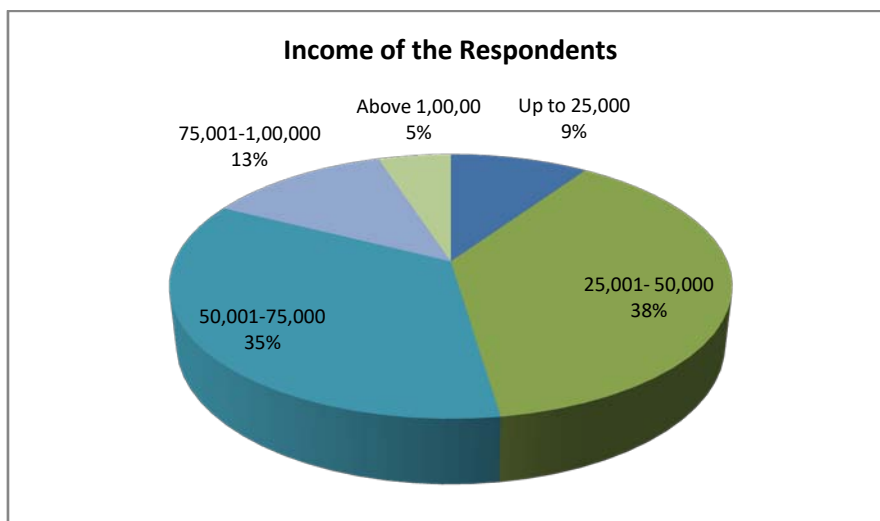


Figure 7: Income of the Respondents

In conjunction to the education, profession the analysis of income is also vital, as it directly affects the buying behavior of an individual. The results retrieved from the data collected states that approximate 9.5 % (57 out of 600) respondents were having income up to 25,000 rupees per month (INR/month). The major respondents counting 38.2% (229 out of 600) were belonging to the class of where income was ranging in between 25,001 to 50,000 (INR/m). Similarly, the total of 209 out of 600 respondents counting 34.8% were having income in the range of 50,001 to 75,000 INR/month, while 12.5% (75 out of 600) were having their stated income in the range of 75,001-1, 00,000 INR/month

Only, 5 % (30 out of 600) respondents were having monthly income above 1,00,000 INR/month.

• Insurance Preference of the Respondents

Considering key objective of the proposed work, the interest of the respondents towards health insurance policies have been assessed. In view of insurance holders, 96% respondents were having health insurance policies, 3% respondents stated that they had the policies but didn't prefer to renew it. While, remaining 1% respondents stated that they had the policies and will update it with better plan.



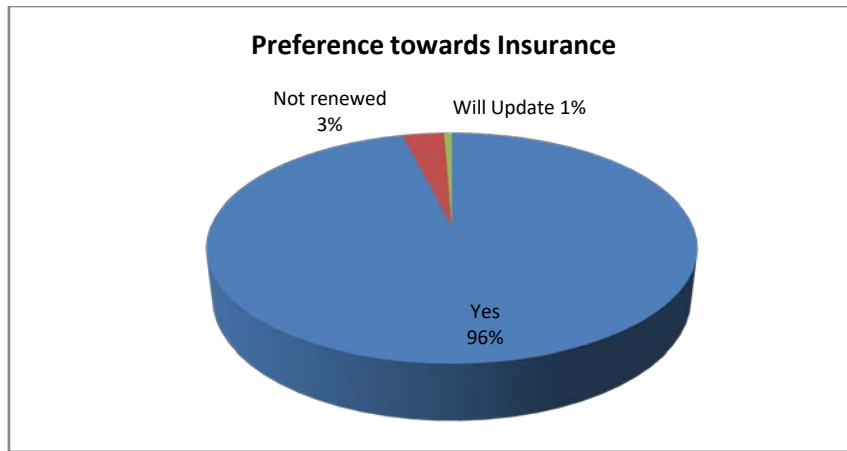


Figure 8: Insurance Preference of the Respondents

• **Policies Preference of the Respondents**

Here, in this study it was found that most of the respondents 33.0 % (198 out of 600) had given preference to the whole life policy while only 15.3 % (92 out of 600) respondents were using accidental policies. Similarly, approximate 13.0 % (78 out of 600)

respondents were having motor accidental insurance policies, followed by 12.7% (76 out of 600) respondents with certain critical illness policies. Furthermore, 12.2% (73 out of 600) respondents were having term policies, 8.0 % (48 out of 600) respondents are having endowment policies.

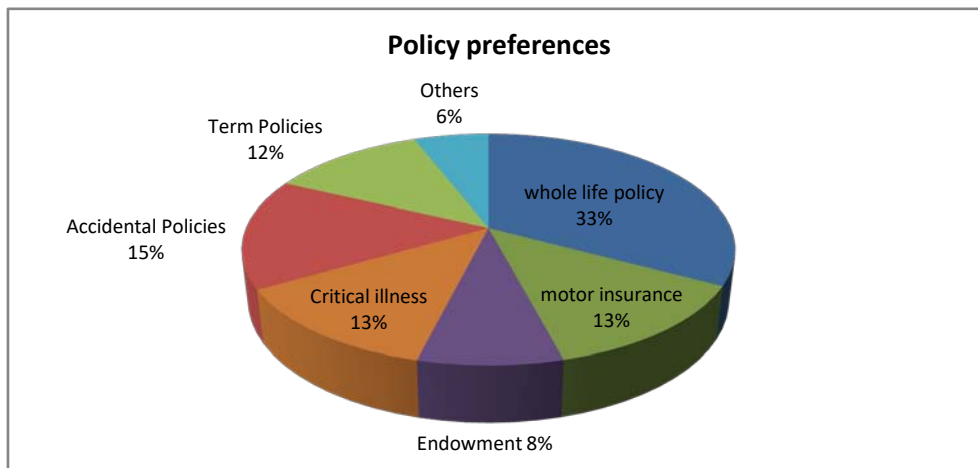


Figure 9: Policies Preference of the Respondents

• **Type of Banks/Insurance Companies**

The following results (Figure) reveals that only 35% (210 out of 600) of respondents stated their view or inclination towards public sector. On the contrary, the

preference was found major towards private banks and insurance companies. Here, 65% (390 out of 600) respondents preferred private sectors institutions.

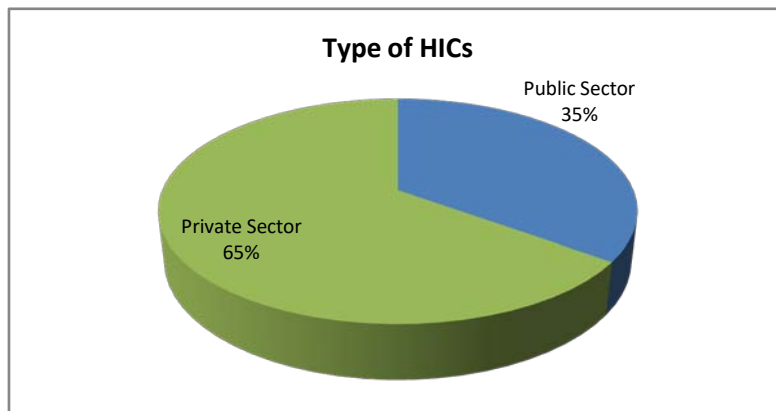


Figure 10: HICs Preferences of the Respondents

• *Policy Duration*

The respondent's relationship with their HICs with respect to time also brought to light, 32.2 % (193 out of 600) respondents having 1-2 years' experience or policy with HIC, 28.7% (172 out of 600) respondents

having 2-3 years of policy with HICs. 21.5% respondents (129 out of 600) were having more than 3 year of policy term and the remaining 17.7% (106 out of 600) were having 0-1 year of experience with certain HIC.

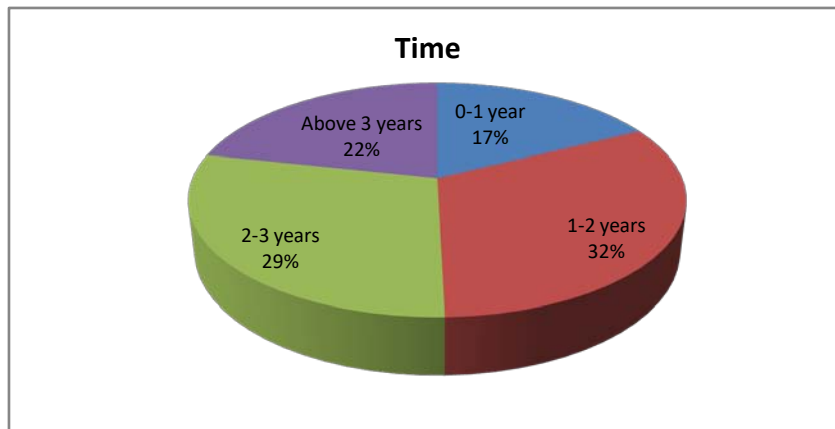


Figure 11: Policy duration

• *Financial Institutions*

To study the effectiveness of the banks responses are collected from the consumers. The study reveals that majority of the respondents (65%) are stated

that private banks are more effective and few of the respondents (35%) stated that public sector HICs are effective.

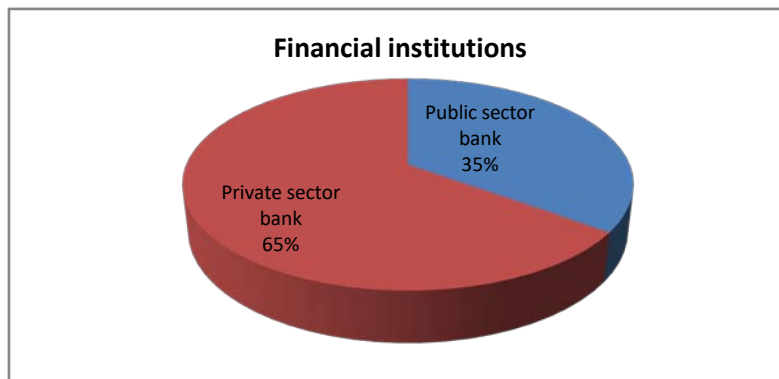


Figure 12: Financial Institution Effectiveness

• *Factors Influencing Consumer's Interest and Decision Process*

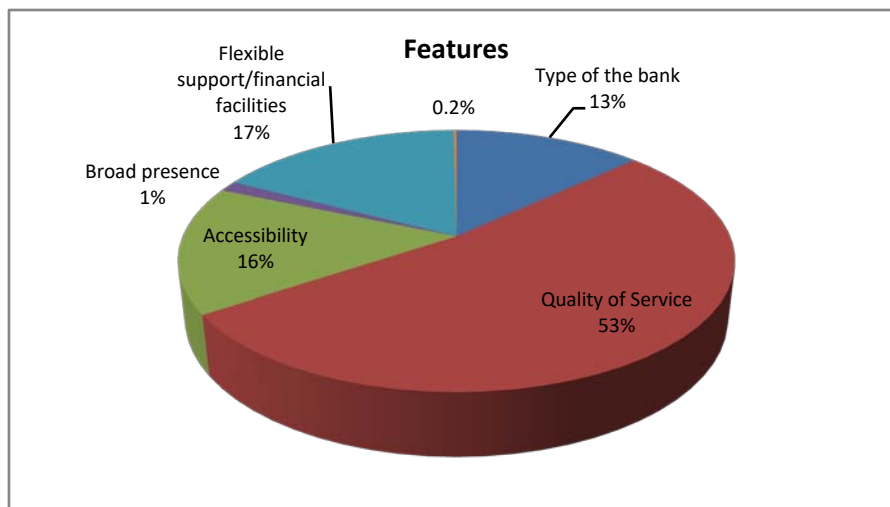


Figure 13: Decision Variables

The respondent importance for feature of the banks to the health insurance policies reveals that, 52.3% (314 out of 600) respondents preferred HIC based on their quality of service, 17.2% (103 out of 600) preferring based on the various support/ financial facility at the critical time health issue. 15.8% (95 out of 600) respondents preferred making decision based on value and ease of accessibility, while the remaining 13.2% respondents (79 out of 600) gave preference to the type of bank to buy health insurance policy.

• *Factors Motivating Consumers Decision Process to take Health Insurance*

The frequency checked for factors motivated for health insurance policy reveals that, 42.3% (254 out of 600) respondents inspired by assurance for support in tough days, 32.2 % (193 out of 600) inspired by uncertainty of life events and 25.3% (152 out of 600) respondents encouraged by sense of security.

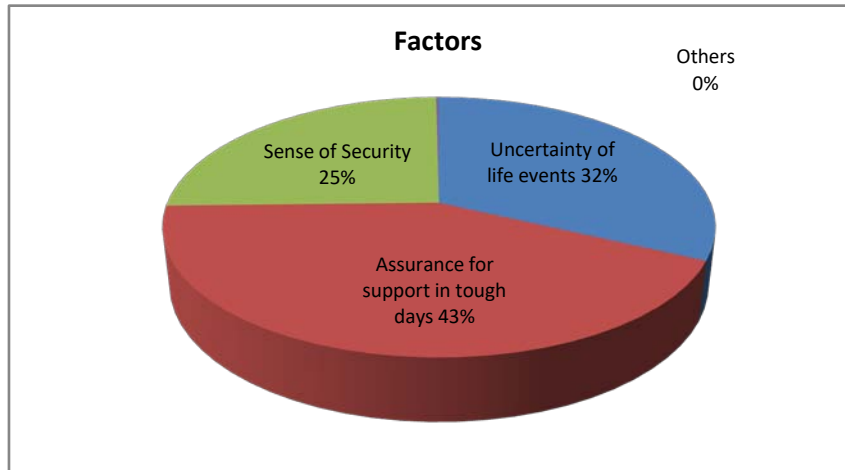


Figure 14: Factors of Bank Motivated for the Respondents

• *Customer Awareness towards Insurance Policies*

In view of respondents familiarity with the Insurance Regulatory and Development Authority (IRDA) rules and quality expectation also brought to light, 35.2 % (211 out of 600) having policies based on sufficient knowledge of rules, policies and associated information,

33.3% (200 out of 600) working with the insurance sector, implies that they were familiar with all the rules. 26.2 % (157 out of 600) were aware of the rules and policies, 5.3% (32 out of 600) respondents were not aware of any significant rules and policies.

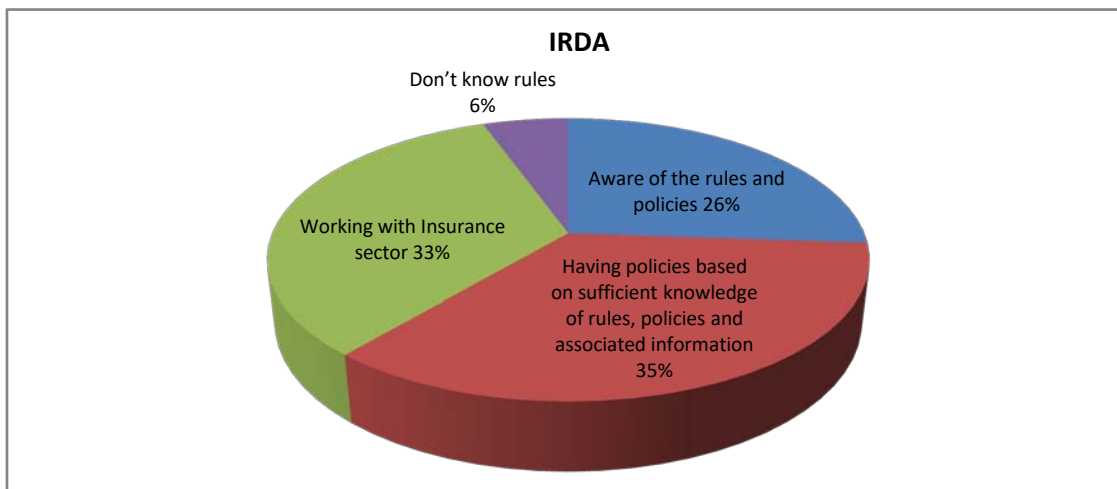


Figure 15: Awareness of Insurance Policy and IRDA rules

h) *Descriptive Analysis*

This section primarily discusses the descriptive type of questionnaire prepared on 5 point's Likert's scale. In this study, considering SQG as the target, SERVQUAL model is applied. Before performing depth study, at first reliability test has been performed for each

SERVQUAL component and associate research questionnaire. A brief of the reliability test performed and respective outcome is given as follows:

i. *Reliability Test*

To assess reliability of the SERVQUAL related questionnaire, Cronbach alpha value has been obtained

for each question. Table 19 presents reliability measures for customer's expectation and perception for HIC services in India for all SERVQUAL dimensions. Noticeably, in this study SERVQUAL model with seven dimensions is considered. This analysis helps establishing whether deleted item is indisputable or not. Accordingly, if alpha increases when the item is deleted then it signifies that the item is not significant. The statistical outcomes obtained () reveals that the Cronbach's alpha for each dimension decreases when any of its items is deleted. This establishes that all items

are significant and true measure of that dimension. From tables, it can be found that all the dimensions have shown reasonably high reliability coefficients that affirms suitability of those dimensions for SQG estimation. The results signify that the average Cronbach alpha for the research questions pertaining to customer expectations is 0.814 and the same for customer's perception is 0.820. The higher values signify suitability of the questionnaire for presented case study.

Table 2: Cronbach alpha for SERVIQUAL model parameters

Attributes/Parameter	Expectation	Perception
Reliability	0.827	0.775
Tangibility	0.861	0.962
Assurance	0.821	0.867
Responsiveness	0.777	0.777
Empathy	0.835	0.770
Credibility	0.774	0.821
Competency	0.806	0.770
Average	0.814	0.820

*Source: Primary Data

ii. SQG Analysis

As stated above, in this study seven key dimensions of SERVQUAL model are applied for SQG assessment. To estimate SQG, we have applied T-test

methodology and the results obtained are given in the following table. The results obtained for the different dimensions pertaining to the specific questionnaire are presented as follows:

- Reliability

Table 3: Service Quality Gap for Reliability Factor

Reliability	Expectation Level		Perception Level		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
Employees and agents of the health insurance companies (HIC) will never too busy to respond to customer requests	4.019	2.202	3.12	1.234	-1.151	2.382	-9.215
Employees and agents of HIC will have the necessary knowledge to give professional service to you.	4.583	0.493	2.85	1.273	-1.733	1.344	-31.769
HIC will deliver timely insurance services without introducing complicate claim processes.	4.232	0.781	2.89	1.305	-1.341	1.564	-21.124
HIC will be truthful in keeping their promises and policy terms.	4.067	0.806	2.49	1.275	-1.573	1.457	-26.604
HIC would be less dependable and consistent in solving customers' complaints.	4.247	0.875	2.55	1.302	-1.695	1.463	-28.531
HIC will provide error free records.	4.390	0.808	2.62	1.321	-1.696	1.483	-28.175

*Source: Primary Data

The results reveal that the consumers expect that the health insurance companies and their employees must be available in solving issues and helping insurers (M=4.019, SD=2.202). The results state that the majority of consumers expect that the HICs would provide 24/7 communication to ensure reliable service support. However assessing respective perceived responses it is found that the mean of the perceived experiences with the banks employees, especially for effective communication is lower than expectations that signifies positive service quality gap

(SQG). SQG is obtained as -1.151 that reflects that motivates HICs to facilitate reliable communication support to insure on time. Since health insurance is percept as a critical support scenario, and hence providing accurate and precise information about policies, claim instruction etc can be of paramount significant to meet service quality need. This study revealed that major (M=4.583) of consumers expect that the bank employee or staffs would be well informed and will provide necessary information about policy, claim related query etc to avoid any future ambiguity or

complexity. However, the responses provided for perception states that there exist negative quality standard (Gap=-1.733) that alarms HICs to train their representative well to provide sufficient and accurate information. It has been found that the banks and associated executives must understand regional educational constructs, awareness variables as well as contemporary consumer's interest, knowledge etc to make them aware of the products, services and policies related information such as premium cost, claim amount, terms and conditions for claim process etc. In addition, the third variable of the reliability parameter examines whether HICs deliver timely insurance services without imposing complicate claim processes. Here, it can be observed that majority of consumers have expected that the banks would be providing flexible insurance claim (M=4.232, SD=0.781). However, the (customer's) perception value reveals that relatively fewer respondents have agreed that banks provide flexible insurance claim (M=2.89, SD=1.305). The smaller value of SQG reveals that the Indian HICs is making the best effort and practicing professional support to enable flexible insurance claim, without introducing complexity. This study also revealed that the majority of the respondents expect that the HICs would be truthful in keeping their promises and policy terms

- *Tangibility*

(M=4.067, SD=0.806). However, on contrary consumers find that HICs are not fulfilling promises completely (M=2.49, SD=1.275). The high value of SQG states that banks lack fulfilling commitment and therefore require ensuring expected quality to meet consumer's satisfaction. It is perceptible through the results obtained (SQG=-1.573). Additionally, the minimal dependence on customers in solving customers' related complaints or problem has also been assessed, where it has been found that the expectation value (M=4.247, SD=0.875) is higher than the really perceived quality and associated perception (M=2.55, SD=1.302). High SQG value (SQG=-1.695) signifies the inevitable need to ensure early problem solving facility. These problems could be raised due to claim process, documentation etc. The SQG value for issue solving is lower than that of fulfilling policy related promises, which signifies that the HICs must emphasize on avoiding false promises and should ensure promised services and support without complexity and without involving customer's physical presence in internal procedures. This result signifies precise outcome as most of the people remain busy and functional in respective daily job related activities and therefore find difficult in roaming around HIC's offices.

Table 4: Tangibility Parameter

Tangibility	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
HIC will have efficient physical facilities, equipments & fixtures	3.976	0.867	2.335	1.230	-1.637	1.467	-27.501
HIC will use modern equipment and technology	4.089	0.870	2.324	1.222	-1.756	1.500	-28.841
HIC will offer you its products and services at competitive prices.	3.978	0.683	2.322	1.223	-1.655	1.366	-29.859
HIC will offer you products and services of the utmost quality.	4.023	0.676	2.425	1.292	-1.598	1.417	-27.772
HIC will keep its promise when it undertakes to do something by a certain time.	4.192	0.736	2.376	1.258	-1.822	1.438	-31.197
HIC will issue contracts containing clear, transparent and non ambiguous terms.	4.265	0.736	2.352	1.263	-1.907	1.440	-32.637
HIC would settle claims easily and with no unnecessary delays.	3.986	0.878	2.397	1.273	-1.588	1.498	-26.109
HIC physical facilities will be visually appealing.	4.281	0.749	2.468	1.323	-1.812	1.511	-29.538
The employees and agents of HIC will be neat appearing.	3.987	0.884	2.375	1.257	-1.611	1.555	-25.520

*Source: Primary Data

This study has revealed that the majority of HIC's consumers expected sufficient physical infrastructures (M=3.976, SD=0.867). On the contrary, assessing the provision of such expected infrastructures this study revealed that the HICs fail in delivering expected tangible facilities (M=2.335, SD=1.230). The higher mean of un-satisfaction signifies that HICs require focusing on tangible infrastructures and more

productive electronic Customer Management System (e-CMS) supports. These supports can be in the form of tangible infrastructure such as cash withdraw machinery such as ATM, claim provision through ATM, notification through mails, and call facilities etc. Consumers have also demanded for modern equipment and technology (M=4.089, SD=0.870). Interestingly, respondents have agreed that the HICs are lacking in providing better

facilities and CRM solutions ($M=2.324$, $SD=1.222$). In any economy whether with higher per capita income or low, the value of price matters a lot. Undeniably, consumers often intend to get quality service even at lower price. This study reveals that a major fraction of respondents expect that HICs must be facilitating quality services at reasonably low cost ($M=3.978$, $SD=0.683$) or the cost being paid must be justifiable. On contrary, this study reveals that most of consumers feel that the service quality being provided by HICs is lower than the expectation ($M=2.322$, $SD=1.223$). Consumers expect that the HICs would provide better services, in terms of technologies, physical infrastructures ($M=4.023$, $SD=0.676$). This study revealed that only 48.5% of respondents are agreed that HICs provide expected quality enriched services, particularly tangible facilities ($M=2.425$, $SD=1.292$). Here, lower gap signifies affirmative approach and service provisioning by HICs in India.

Consumers do expect that HICs would keep its commitment when it promises to execute certain services at a predefined time, especially insurance claim facility ($M=4.192$, $SD=0.736$). This study revealed that a major fraction of consumers feel that banks are not keeping their promises with proposed service quality ($M=2.376$, $SD=1.258$). Before taking any health insurance policy, consumers expect that the HICs would facilitate contract papers, claim related documents, terms and conditions etc clear and non-ambiguous ($M=4.265$, $SD=0.736$). However, results state that the consumer are unsatisfied because of the unclear, ambiguous policy that they come to know later, once making contract or insurance ($M=2.352$, $SD=1.263$). This study also revealed that in response to the expectation made for easy claim settlement ($M=4.00$, $SD=0.878$), banks intends to avoid any delay and complexity that might influence consumer perception

- *Assurance*

The following table presents the expectation and perception related responses pertaining to assurance dimension of SERVQUAL model.

Table 5: Assurance Parameter

Assurance	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
HIC will have the ability to provide variety of value added services to customers, e.g. loan facilities, etc.	4.168	0.765	2.412	1.286	-1.756	1.460	-29.633
HIC will have employees and agents who give you personal attention.	4.087	0.639	2.629	1.371	-1.459	1.502	-23.928
Employees would be sincere and patience in resolving customers' complaints/problems	4.153	0.779	2.504	1.329	-1.65	1.509	-26.951
Employees' will have the required skills and knowledge to answer customers' questions	4.089	0.638	2.512	1.342	-1.576	1.464	-26.519

*Source: Primary Data

Considering the significance of assurance as a key quality parameter, in this study the respondents have been interviewed and their responses have been

and affinity towards allied products and services ($M=2.397$, $SD=1.273$). This study revealed that customers prefer having better and attractive visual presentation and appealing physical infrastructure ($M=4.281$, $SD=0.749$). It has been found that the HICs still emphasizes on introducing visual appealing presence to attract consumers and influence their buying behavior ($M=2.468$, $SD=1.323$). Interestingly, respondents agree that the private HICs have been emphasizing on competitive infrastructures and presentation for customer acquisition. The interview made with respondents belonging to Bangalore, Delhi, Mumbai revealed that when meeting HIC's agents the dress up and neat presentation plays a significant role in making comfortable communication and buying decision ($M=3.987$, $SD=0.884$). Respondents also revealed that the poor presentation and visual presentation of employees reduce chance to make business deals with the consumers and therefore in last few years HICs are focusing on providing better product visual presentation that not only affects customers buying decision but also promotes its service for getting acceptability and attention. In this study, higher perceived value is observed primarily for private sector HICs ($M=2.375$, $SD=1.257$) that reflects their positive efforts towards service quality optimization. Thus, taking into consideration of these facts, it can be easily understood that there has been effort made by HICs to provide better tangible facilities. Undeniably, the rising economy, value of money, consumer consciousness, and global competitive market are the prime reason for such consumer behavior. Interestingly, it is also significant to understand that even the banks try to provide better services however rising interest and expectation make consumer feel unsatisfied and hence to cope up with such situations, financial institutions need to meet these quality expectations.

obtained. Considering consumer's expectations it has been found that to make their health insurance (policy) purchase, customers expect that the HICs would have

the capability to facilitate value added services to customers, e.g. loan facilities when needed in distress condition (M=4.168, SD=0.765). It has also been found that consumers are getting expected quality support, the additional supports in terms of technical guidelines, process assistance etc when needed (M=2.412, SD=1.286). Consumers expect that the HICs would have sufficient resources to provide optimal support, guidance and attention when required (M=4.087, SD=0.639). Consumers also expects that the HICs would assure sincere support in resolving customers related complaints (M=4.153, SD=0.779). The consumers responses towards HIC service quality state that there exist a minor but significant vacuum in commitment and delivery (M= 2.504, SD=1.329). In addition, the responses' revealed that the customers expect that the HICs employees would have sufficient skills and knowledge to answer customers' queries (M=4.089, SD=0.638). However, high value standard deviation states that it can't be the universal fact and particularly in urban areas and hence the HIC

representative should have sufficient understanding and knowledge to answer consumer's queries. Consumers perception towards executives knowledge and ability reveals that HICs require providing better training, regional language understanding and convincing ability to its representative to alleviate any possible ambiguity during service period (M=2.512, SD=1.342).

• *Responsiveness*

Exploring in depth of the responsiveness factor, it has been observed that to make policy purchase decision, consumers expect that the HIC's representative would be willing to help customers with prompt response (M=4.196, SD=0.757), however banks do fail in meeting complete expectation (M=2.469, SD=1.323). Observing following table and respective Standard Deviation (SD) value in both expectations and perception, it can be found that there is high SD in the responses that signifies that not all respondents are agreed with these imitations.

Table 6: Responsiveness Parameter

Responsiveness	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
Employee will be willing to help the customers & have the ability to answer promptly	4.196	0.757	2.469	1.323	-1.726	1.508	-28.202
Employees and agents of the HIC will tell you customers exactly when the services will be performed.	4.087	0.858	2.561	1.359	-1.525	1.596	-23.536
Employees and agents of HIC will do their best to give you prompt service	4.068	0.877	2.743	1.453	-1.322	1.650	-19.748
Employees and agents of HIC will be always willing to help you in emergency situations.	4.025	0.939	2.472	1.327	-1.521	1.638	-23.341

*Source: Primary Data

This study revealed that consumers expect precise information of claim process, time and conditions (M=4.087, SD=0.858). Since majority of the respondents are from urban region and are aware of the health insurance policies, not all respondents have expect the same. It can be observed by the higher value of SD (0.858). Interestingly, the responses reveal that either the date or terms provided by banks remains wrong, in some cases or are not fulfilled as proposed (M=2.561, SD=1.359). Undeniably, there exists a gap to be filled, however low gap signifies that the consumers are satisfied with the delivery to certain extent. This study has revealed that the consumers expect that HIC's employees would do best to give prompt service (M=4.068, SD=0.877). The real scenario signifies a contrast outcome, where consumers feel that the HICs don't fulfill commitments completely and there exists a gap (M=2.743, SD=1.453). The obtained SQG reveals that the HICs require emphasizing on transparent and honest support for what they promise to the consumers. Consumers expect that the HICs executives would always be ready and

willing to help consumers in emergency situations (M=4.025, SD=0.939). The responses retrieved towards consumers perception states that in major cases bank executives and agents continues helping them (M= 2.472, SD=1.327), however even a slight but quality gap can't be ignored.

• *Empathy*

Considering the significance of the empathy factor, in this study seven questions have been formulated that intend to assess consumer's expectation and perception after getting policy. Consumers expect that the HICs would show sincere interest in solving their (consumers) problem, particularly in installment payment and claim process (M=3.864, SD=0.990). It has also been found that there exist some lacking from HICs (M=2.972, SD=1.426). Consumers expect that the HICs would provide appropriate services without troubling consumers and making the process complicate (M=3.983, SD=0.911). Respondents also revealed that usually such complexities are tried to be avoided by HICs (M=2.031, SD=1.182). Consumers

expect to get consistent courteous towards customers related issues (M=4.028, SD= 0.896). However, the responses retrieved states that once taking the policy

HICs executives try to ignore the consumers and focus on new targets (M=2.336, SD=1.286).

Table 7: Empathy Parameter

Empathy	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
HIC will show sincere interest in solving problem	3.864	0.990	2.972	1.426	-0.891	1.705	-12.875
HIC will offer services right the first time without discomforting you.	3.983	0.911	2.031	1.182	-1.95	1.500	-32.026
Employees and agents of HIC will be consistently courteous towards customers and pays attention towards their problem	4.028	0.896	2.336	1.286	-1.693	1.543	-27.040
When you have a problem HIC will show sincere interest in solving it	4.139	0.864	2.057	1.196	-2.08	1.431	-35.822
HIC will have the favorable terms and conditions	4.158	0.850	2.421	1.302	-1.736	1.547	-27.639
HIC will have operating hours convenient to all customers	3.975	0.919	3.091	1.456	-0.886	1.766	-12.361
HIC would apologize for inconvenience caused to the customers	4.093	0.867	2.186	1.298	-1.709	1.557	-30.204

*Source: Primary Data

This study has revealed that there is the SQG in providing sincere interest to solve the key issues of the consumers (M=-2.08, SD=1.431). The terms and policies play vital role in attracting consumers by fulfilling their expectation. It is found that the HIC's consumers expect that HIC would have the favorable terms and conditions (M=4.158, SD=0.850). In this study, an unexpected fact has surfaced stating that though all consumers expect flexibility policies as per their comfort level; however the higher standard deviation states a something different story. Additionally, the negative SQG signifies that the HICs do formulate policy as per consumer demand so as to alleviate the SQG. HICs will have operating hours convenient to all customers (M=3.975, SD=0.919). Here, negative SQG value affirms that the HICs are doing better to alleviate the gap caused due to accessibility and operational time. Additionally, study revealed that the HICs would apologize for the inconvenience caused to the customers (M=4.093, SD=0.867) and will do needful to compensate losses.

• *Credibility*

In the last few years internet based financial transactions, e-CRM processes and activities etc have increased a lot. HICs too are focusing on the use of

electronic media to make e-CRM more efficient and productive. However, the rising cyber crime events, especially account hacks, illegal transactions, fraud activities etc have forced consumers to rethink about seamless communication and transaction. The credibility to provide seamless and secure transaction and financial processes can be of vital significance. This study revealed that consumers expect safe transaction process, particularly during premium payment and respective inter-bank transactions (M=4.159, SD=0.851). On the other hand, when exploring about the perception, it was revealed that the HICs lack in assuring consumers safe transaction and the sense of threat prohibits them to make online transaction (M=2.018, SD=1.168). The SQG (Gap=-2.181) in safe transaction signifies the inevitable need of enabling banking process security. Credibility is also influenced by the behaviors of HIC employees towards consumer's services and support. This study revealed that consumers expect HIC employees to instill confidence in every situation by assuring pleasing, justifiable and genuine verbal/non-verbal support (M=4.038, SD=0.906). This study revealed an affirmative response by customers (M=2.376, SD=1.317).

Table 8: Credibility Parameter

Credibility	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
You will feel safe in transactions with HIC.	4.159	0.851	2.018	1.168	-2.181	1.396	-37.784
The behavior of HIC's employees and agents will instill confidence in you	4.038	0.906	2.376	1.317	-1.692	1.575	-25.998
The employees and agents of HIC will understand specific needs	4.042	0.892	2.034	1.178	-2.048	1.448	-34.165

*Source: Primary Data

This study revealed that the consumers expect HIC's agents to understand specific needs and be helpful when needed (M=4.042, SD=0.892), however consumers find a significantly high gap (M=2.034, SD=1.178).

• *Competency*

Competency is considered as one of the force- element of any organization or individual that positively affects customer acquisition, retention and business

growth. Consumers too can be found inclined towards a bank providing competitive quality enriched facilities and supports. This study revealed that consumers expect that HICs will ensure service quality by business process and provision as well as physical appearance (M=4.032, SD=0.898). However, consumers feel that banks are still not as per their expectations (M=2.836, SD=1.444).

Table 9: Competency Parameter

Competency	Expectation Level (E)		Perception Level (P)		Gap (P-E)		t-value
	Mean	SD	Mean	SD	Mean	SD	
Service associated materials (leaflets, prospects, various service documents etc) used by HIC will be visually appealing.	4.032	0.898	2.836	1.444	-1.196	1.708	-17.244
HIC offers its services to you within the specified by contract time limits.	3.985	0.912	2.263	1.354	-1.721	1.649	-25.721
HIC will issue error free bills, statements, receipts, contracts, claims and other documents.	3.939	0.955	2.397	1.329	-1.542	1.607	-23.628
HIC will give you individual attention.	3.962	0.924	2.474	1.335	-1.487	1.591	-23.024
HIC has best interests at heart.	3.983	0.719	2.854	1.449	-1.29	1.476	-17.658

*Source: Primary Data

Consumers prefer making buying decision based on the fact whether the HIC offers its services within the specified contract time limits with agreeable (customer centric) terms and conditions (M=3.985, SD=0.912). Consumers also expect to get services on the predefined time (M=2.263, 1.354). Furthermore, to provide guaranteed and flawless service provision, HICs should issue error free bills, statements, receipts, contracts, claims and other documents (M=3.939, SD=0.955). However, the same consumers have agreed that not as per expected but then while banks do provide satisfactory documents and error free slips (M=2.397, SD=1.329), especially the claim related documents. Additionally, consumers expect that the HICs would facilitate dedicated personalized attention to

the customer (M=3.962, SD=0.924). On the contrary, responses obtained reveals that the HICs not providing personalized attention as per need (M=2.474, SD=1.335). A human behavioral factor, emotion and emotion attached support has been examined. The respondents agreed that the HICs should be standing with consumers in every situation (M=3.983, SD=0.719). Not surprisingly, being in a competitive and globalized market, major consumers have stated that HICs have been incorporating varied measures and facilities while intending to meet consumers expectations (M=2.854, SD=1.449). Based on the above discussions and consolidated outcomes, this study has identified SQG for each SERVQUAL dimensions. The SQG obtained is given as follows:

Table 10: Overall Service Quality Gap (SQG)

SERVQUAL Parameter	Perception	Expectation	SQG
Reliability	2.73	4.26	1.53
Tangibility	2.37	4.08	1.7
Assurance	2.51	4.12	1.61
Responsiveness	2.56	4.09	1.52
Empathy	2.44	4.03	1.56
Credibility	2.1	4.07	1.97
Competency	2.56	3.98	1.44

As already discussed, in SERVQUAL model, the difference in consumer perception and its expectations represents the SQG. Here SQG (Perception-Expectations) with positive value refers that the consumers are satisfied with the service being provided. On the contrary, the negative gap value reflects that the consumer's perception is lower than that of respective expectations. it can be found that there exists different

gap value with different quality constructs. Exploring in depth, it can be found that the in major terms or parameters (SERVQUAL parameters), the mean of the expectations of these parameters are higher than their perception. It depicts that the consumers don't get services as per their expectations and hence indicates towards the need of augmenting service quality to attract customer and motivate them for health insurance

products. In addition, convincing customers to understand the significance of health insurance can be vital to motivate for health insurance products and services.

i) Hypothesis Testing

To examine the impact of SQG on Indian HICs, in this study certain hypothesis have been formulated. This section evaluates the acceptance and/or rejection of the pre-defined hypotheses.

In order to test SQG related hypothesis, Paired Sample T-test tool has been applied.

Hypothesis-1 Customer expectations of Reliability factors are higher than the perceived quality of Reliability in Indian health insurance companies.

Taking into consideration of the parameters obtained (Table 13), it can be found that the mean expectation of the consumers is 4.26 (on 5 point Likert's scale) which is higher than the perception level of the consumers (2.73). It reflects the gap of 1.53. It depicts that the paired means are different and hence null hypothesis is rejected. It reveals that the hypothesis is accepted. Thus, it justifies that the customer expectations of reliability factors are beyond of perceived quality of Reliability in Indian health insurance companies.

Hypothesis-2 Customer expectations of Tangibles factors are higher than the perceived quality of Tangibles in Indian health insurance companies.

Taking into consideration of the results obtained (as the response from consumers) for the Paired sample T-test (Table 10), it can be found that the mean expectation of the consumers is 4.08, which is higher than their perception (2.37). The gap of 1.7 reflects that the hypothesis is accepted. It reveals that the customer expectations for tangibles facilities or factors are beyond of perceived quality of tangibles in Indian health insurance companies.

Hypothesis-3 Customer expectations of Responsiveness factors are higher than the perceived quality of Responsiveness in Indian health insurance companies.

Results reveal, it can be found that the expectation level of the consumers towards HIC's (executives or representatives) assurance is higher (4.12) than that perception (2.51). The gap of 1.61 affirms that the null hypothesis is rejected and hence the alternate hypothesis is accepted that reveals that the customer expectations of Assurance factors are beyond of perceived quality of HIC's assurance from the Indian health insurance companies.

Hypothesis-4 Customer expectations of Empathy factors are higher than the perceived quality of Empathy in Indian health insurance companies.

The paired sample T-test results obtained for HIC's responsiveness (Table 10) states that the mean

expectation of the consumers is 4.09 which is higher than respective perception (2.56). The positive gap of 1.52 affirms that the null hypothesis is rejected and the alternate hypothesis is accepted. The result affirms that the customer expectations of Responsiveness factors are beyond of perceived quality of HIC's responsiveness from the Indian health insurance companies.

Hypothesis-5 Customer expectations of Assurance factors are higher than the perceived quality of Assurance in Indian health insurance companies.

Considering the results obtained in Table 10, it can be found that the mean expectations of the consumers are 4.03 which is higher than the perception (2.44). Thus, the gap of 1.56 states that the null hypothesis is rejected and thus the alternate hypothesis is accepted. The acceptance of the hypothesis that the customer expectations of empathy factors are beyond of perceived quality of HIC's empathy from the Indian health insurance companies, states that the companies need focusing on the provision of empathy and easy access to the associated factors and resources.

Hypothesis-6 Customer expectations of credibility factors are higher than the perceived quality of HIC's credibility from the Indian health insurance companies.

The paired sample T-Test results (Table 10) illustrates that the consumers perception towards the HIC's credibility is lower (2.1) than the expectations (4.07). Thus, the gap of 1.97 states that the null hypothesis is rejected and thus the alternate hypothesis is accepted. In other words, characterizing the significance of organizational or the HIC's credibility, it can be stated that despite of transparent and more reflective processes, still HICs require convincing consumers and justify their credibility.

Hypothesis-7 Customer expectations of competency factors are higher than the perceived quality of HIC's competency from the Indian health insurance companies.

Considering Table 27, it can be found that the means of consumer's expectations, particularly towards competing facilities and features, it can be found that there exist difference between consumer's expectation (3.98) and perception (2.56). Thus, the gap of 1.44 confirms the rejection of the null hypothesis and the acceptance of alternative hypothesis.

Hypothesis-8 The service quality gap impacts on the business performance of Indian Health Insurance Companies (HICs).

In this hypothesis, the impact of SQG on HIC's performance has been examined. To test the hypothesis, correlation analysis has been done between SQG for different SERVQUAL parameters and respective mean of the consumer's perception. Exploring in depth, it can be found that consumer's perception towards any

HIC's service quality reflects its affinity to that HIC that as a result increases market share and revenue. It depicts the direct relation between consumer's perception and HIC's performance. With this assumption, in this study, the Pearson correlation

between consumer's perception and respective SQG value has been obtained. In this test, seven SERVQUAL parameters have been considered. The Pearson correlation obtained is presented as follows (Table 11).

Table 11: Pearson Correlation between SQG and Health Insurance Companies Performance

		HIC_Performance	Service_Quality_Gap
HIC_Performance	Pearson Correlation	1	-.894**
	Sig. (2-tailed)		.007
	N	7	7
Service_Quality_Gap	Pearson Correlation	-.894**	1
	Sig. (2-tailed)	.007	
	N	7	7

** . Correlation is significant at the 0.01 level (2-tailed)

Observing the results, it can be found that the Pearson correlation between HIC performance and SQG is 0.894 which is higher than the significance level. It depicts that there exist strong correlation between SQG

and Indian health insurance companies. Thus, the null hypothesis is rejected and alternate hypothesis stating that the SQG impacts the performance of HIC is accepted.

i. Customers Recommendations Analysis

Table 12: Recommendations

I will	Mean	Std. Deviation
Say positive things about the company to other people.	3.840	0.870
Recommend the company who seeks my advice.	2.591	0.982
Encourage friends and relatives to buy products from the company.	2.573	0.961
Do more business with the company in next few years.	2.736	2.339
Consider the company as first choice to buy various services.	2.604	0.979
Do business with the company in the next few years.	2.594	0.964
Take some of my business to a competitor that offers better products at more attractive prices.	2.930	4.150
Continue to do business with the company even if its prices increases somewhat.	2.805	3.157
I am ready to pay higher price than the competitors charge for the benefits I currently enjoy from the company.	2.598	0.950

*Source: Primary Data

This study reveals that customer confess the policies, service quality and other process elements with their known, that eventually impacts their decision process and buying behavior (M=3.840, SD=0.870). It signifies that the HICs must make their consumers satisfied if they want to promote their business and policies through primary consumers. A fact that when the consumers find that the financial institutions work as per expectations and respect their expectations as well as suggestion then they recommend that bank to their known (M=2.591, SD=0.982). However, a section of respondents believe that the buyers make their decision at per their interest, ability, understanding and benefits. If banks ensure optimal quality of service, then consumers don't hesitate to make their friends or known aware about that specific products, service or the HIC (M=2.573, SD=0.961). The consumers have stated that in case of expected quality delivery, they will make other aware about that specific product or service that as a result can yield better outcome. In case HICs meet the consumers' expectations, they can make more businesses in future (M=2.736, 2.339) and even they

will give the HIC or company as the first priority to make any future policy purchase (M=2.604, SD=0.979). The consumers have stated that they would prefer taking other HIC services, if the company doesn't meet expectations and doesn't provide optimal solution at reasonable cost and complexity (M=2.930, SD=4.150). Here, they mean to state that a consumer will consider a HIC or company only when it provides better solution at low cost without compromised quality. So the institution must ensure quality enriched product and service while ensuring optimal cost. However, some consumers stated that they would continue doing business with the company even if its prices increases somewhat (M=2.805, SD=3.157). However, higher deviation states that all the respondents are not agreed with this. An interesting fact that the consumers are willing to business with the company even at the elevated or higher price, provided the company assures them quality service (M=2.598, SD=0.950).

Table 13: Service Switching Reasons

If I experience a problem with the company's service I will	Mean	Std. Deviation
Switch to a competitor.	2.774	2.571
Complain to other consumers.	2.780	3.123
Complain to external agencies such as ombudsman and grievance cell.	2.624	1.895
Complain to company's employees.	2.586	0.892

*Source: Primary Data

For any organization, consumer retention plays a vital role in maintaining higher market share and sustainability. With this objectives, in this study the key reason that could force a consumer to leave the health insurance policy of the banks have been analyzed. Here, it has been found that in case the HIC is not able to main quality service and best practices, the consumer can switch to other competitor providing better service (M=2.774, SD=2.571). In case of quality violation, even the consumer can complain to other consumers, other forums that might lead devastating reliability and credibility of the company resulting into reduced performance (M=2.780, SD=3.123). The consumers can complain to the company employees to who try to convince the same consumer at the time of policy selling process (M=2.586, SD=0.892). The unsolved issues and more complex service violation can force consumers to reach external agencies such as ombudsman and grievance cell (M=2.624, SD=1.895).

j) Limitation of the Study

The present research has been done by considering consumer perspective; however consideration of company perspective could give more precise outcome. This research considers consumer perceptions of the performance indicators and hence the financial performance parameters are not taken into consideration. Considering financial parameter as the performance variable can give more realistic figure. Also the relative health insurance companies' performances and gap analysis for public and private sector banks are not done.

IV. CONCLUSION

In any economy the happiness index of its citizen often plays significant role in augmenting overall productivity and efficiency. On the other hand, facilitating optimal health condition of the resources and associated support can be of paramount significance. India, being an economy of more than 1.3 billion populations possesses immense potential for health insurance. The service quality by Health Insurance Companies (HICs) often plays significant role towards customer acquisition and retention. Service Quality Gap (SQG) which signifies the difference between consumer's expectations and the perceived quality after receiving service influences consumer's buying decision and the success of products and services. With this motivation, in this manuscript an empirical analysis for

SGQ assessment in Indian Health Insurance Companies (HICs) has been performed. To perform analysis, mixed research paradigm has been applied where a case study pertaining to SQG in Indian HIC has been performed by collecting data from primary as well as secondary data sources. Primary data is collected through semi-structured interviews which were conducted with the HICs consumers belonging to the different locations and demographic constructs across India. A total of 600 respondents belonging to Bangalore, Mysore, Chennai, Mumbai, Pune, Delhi/NCR, Chandigarh, Jaipur, and Lucknow were interviewed and respective perception towards SQG in current HICs was examined for which modified SERVQUAL models with seven dimensional artifacts were used. The reliability test for each questionnaire considered exhibited Cronbach alpha more than 0.7 that affirms suitability of the questionnaire for the intended study. Discussing in depth, it can be found that there exist negative quality gap (SQG=-1.53) in reliability and therefore banks need to focus on fulfilling promised services while keeping consumers in confidence. The quality gap in other constructs such as, tangibility (SQG =1.7), assurance (SQG =1.61), responsiveness (SQG =1.52), empathy (SQG =1.56), credibility (SQG =1.97), and competency (SQG =1.44) also reflect that there exist certain gap in major quality constructs. However, it can be found that in tangibility and credibility dimensions and associated results reveal that the HICs do fulfill or are intending to fulfill consumer's expectations. This is because of the advanced technologies, infrastructure development and different tangible and intangible assets availability. However, the SQG obtained indicates towards the need of further quality enriched provision such as tangible assets like cash withdraw machinery such as ATM, claim provision through ATM, notification through mails, electronic CRM (e-CRM) facilities etc. In this study, it has been found that the HICs (here, particularly the representatives of the HICs) must be capable and willing to help the customers and should answer consumers promptly. Here, it has been observed that being a short as well as long term policy making process, consumers are always cautious and are enthuse in knowing the key aspects of policy, terms and conditions, and the value and time of claim etc. Here, it can be observed that empathy attributes do reflect maximum quality gap, thus demanding HICs to let consumer access major facilities to promote satisfaction. On the other hand, credibility related attributes have affirmed that the HICs do fulfill

major expectations of the consumers. However, the other constructs cannot be ignored, as these quality factors too plays significant role in assuring consumer satisfaction that eventually lead to the consumer retention and increase in market share or the firm's performance. The Pearson correlation between SQG values for different SERVQUAL dimensions and HIC's performance has revealed that there is strong correlation between SQG and the firm performance. Therefore, the HICs must emphasize on fulfilling consumer's expectations to gain more customer acquisition, higher retention and competitive advantages.

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Workplace Spirituality and Pro-Environmental Behavior: The Role of Employee Engagement and Environmental Awareness

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Abstract- A key challenge facing organizations is how to encourage employees to engage in pro-environmental behaviors. Workplace spirituality has been conceptualized as offering new insights into how individuals experience a deeper level of intrinsic work motivation and engagement. Based on a survey of 349 nurses, we found that workplace spirituality was significantly associated with nurses' pro-environmental behavior and that employee engagement indirectly affects the relationship between workplace spirituality and pro-environmental behavior. The results suggest that environmental awareness moderated the effect of workplace spirituality on pro-environmental behavior of nurses. Managers of nursing services should consider workplace spirituality and its positive influence on nurses' outcomes in order to improve their performance and, subsequently, the healthcare system.

Keywords: workplace spirituality, employee engagement, pro-environmental behavior, environmental awareness, nurses.

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Workplace Spirituality and Pro-Environmental Behavior: The Role of Employee Engagement and Environmental Awareness

Miss Ayesha Latif ^α & Miss Sidra Aziz ^σ

Abstract- A key challenge facing organizations is how to encourage employees to engage in pro-environmental behaviors. Workplace spirituality has been conceptualized as offering new insights into how individuals experience a deeper level of intrinsic work motivation and engagement. Based on a survey of 349 nurses, we found that workplace spirituality was significantly associated with nurses' pro-environmental behavior and that employee engagement indirectly affects the relationship between workplace spirituality and pro-environmental behavior. The results suggest that environmental awareness moderated the effect of workplace spirituality on pro-environmental behavior of nurses. Managers of nursing services should consider workplace spirituality and its positive influence on nurses' outcomes in order to improve their performance and, subsequently, the healthcare system.

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I. INTRODUCTION

There is growing public concern about the environment and related protection issues that have occurred in recent years (Abdelzaher & Newburry, 2016; Binder & Blankenberg, 2017; Sihvonen & Partanen, 2017; Tang & Lam, 2017). Environmental issues, such as climate changes, ozone depletion, deforestation, depravation of ecosystems and loss of biodiversity, are among the matters that have attracted a lot of attention. As the role of businesses in environmental protection becomes more prominent, companies need to be more responsible toward the environment; companies should adapt their business activities to include environmental protection and appropriate management of natural resources (Wassmer, Paquin, & Sharma, 2014). In today's uncertain world, organizations support their employees to be active and thus enable the organization to progress more effectively. Organizations require personnel who are pioneers and active regardless of their position in the organizational hierarchy.

Corresponding to the awareness that employee engagement in greening organizations is crucial to organizational environmental stewardship and performance, scholars have increasingly studied pro-environmental behavior at work (Andersson et al., 2013).

The concept of pro-environmental behavior is defined as individual behavior that contributes to organizational environmental sustainability (e.g., saving office supplies, separating trash at the source, open communication and information sharing among employees regarding environmental sustainability) that is under the volitional control of employees (Kim et al., 2017). Employee's pro-environmental behavior (PEB) essentially contributes to promote sustainable development (De Groot & Steg, 2010). The participation of nurses to address environmental issues and engage in eco-friendly behaviors is considered as an effective strategy to become environmentally responsible organization and enhance environmental performance (Djellal & Gallouj, 2016; Kangasniemi, Kallio, & Pietilä, 2014).

Hospitals generate substantial environmental impacts (Blass et al., 2017). Although adopting green organizational practices is important, the role of individual employees is equally significant (Lamm et al., 2015); implementation will be impossible without their active participation (Jenkin et al., 2011). Notwithstanding the growing attention to PEB, there is a dearth of empirical studies on the factors associated with these behaviors (Lamm et al., 2015). This study is going to explore how workplace spirituality can enhance PEBs among nurses through mediating effect of employee engagement and moderating effect of environmental awareness? One important way that organizations can improve environmental performance is by more effectively engaging their employees. Engagement has emerged as an important organizational behavior variable that contributes significantly to employee productivity and organizational performance (Saks, 2011). While a considerable number of studies have been conducted on employee engagement, much still remains to be learned about its antecedents (Rich, Lepine, & Crawford, 2010; Wollard & Shuck, 2011). This includes the need to better understand the underlying intrinsic motivation basis for employee engagement (Meyer & Gagne, 2008) and how the level of engagement is impacted by work meaningfulness (Hughes & Rog, 2008). Workplace spirituality is a construct of increasing interest to scholars who see it as providing new insights into work meaning (Rosso, Dekas, & Wrzesniewski, 2010), and employee work attitudes (Benefiel, Fry, & Geigle, 2014; Milliman,

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Gatling, & Bradley-Geist, 2017), including engagement (Saks, 2011).

This study seeks to build on two previous empirical workplace spirituality-engagement studies (Petchsawang & McLean, 2017), by examining three dimensions of workplace spirituality which are conceptually similar to key sources of work meaning as observed in Rosso et al.'s (2010) review of the meaning of work literature. In contrast to prior research, the current study also includes a more recently developed operationalization of engagement by Rich et al. (2010) to avoid potential confounding of this construct with the meaningful work dimension of workplace spirituality. In addition, this is the first investigation to empirically determine the joint effects of workplace spirituality and engagement on employee pro-environmental behavior. In doing so, this study seeks to provide new insights into the antecedents and outcomes of engagement (Wollard & Shuck, 2011; Yeh, 2013) as well as address the need for more empirical research on how workplace spirituality theory can influence organizational behavior variables and performance (Giacalone & Jurkiewicz, 2003).

Qu et al. (2015) defined environmental awareness as the concern and the knowledge people have about anthropogenic influences on the environment and climate. Kollmuss and Agyeman (2002, p. 349) argued that "because of the non-immediacy of ecological destruction, emotional involvement requires a certain degree of environmental knowledge and awareness." Notwithstanding the evidences that the workplace spirituality can lead to PEB, according to its definition, workplace spirituality leaves employees with considerable latitude. Thus, the interaction of environmental awareness with workplace spirituality is likely to strengthen this relationship and increase employees' participation in environmentally friendly behaviors (Afsar et al., 2016).

Enabling the expression of human experience at its deepest, most spiritual level may help organizations to achieve greater environmental performance (Laszlo & Zhexembayeva, 2011).

Notwithstanding the abundance of research observing the motivational factors underlying people's participation in PEB in public and private settings (Ozaki, 2011; Steg et al., 2014), there is a gap in the literature regarding employees' engagement in PEB in the workplace (Ruepert et al., 2016; Temminck, Mearns, & Fruhen, 2015). Previous research on this subject suggests that materialistic rewards and penalties are considered the least significant mechanism in encouraging employees to engage in such behaviors (Zibarras & Ballinger, 2011). Thus, there seems to be a lack of a suitable theoretical model to foster employees' involvement in sustainable behaviors on a spiritual level, which is not necessarily motivated by a materialistic framework (Temminck et al., 2015). Since it is known

that less tangible motivations are more significant drivers of individuals' PEB in comparison to tangible motivations (Vaske & Kobrin, 2001), it is plausible to focus on employees' PEB through the lens of workplace spirituality. Despite widespread discussions about the role of workplace spirituality in organizational management literature (Afsar et al., 2016), there are hardly any studies in literature that have empirically extended to this significant variable (Gatling et al., 2016). Moreover, spirituality is an under-researched phenomenon in the health-care context (Ebrahimi et al., 2016).

II. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Invoking spirituality at work through promoting the employees' sense of social connection, membership and transcendence motivates them intrinsically to strive for the social good out of concern for future generations (Afsar et al., 2016). Previous studies have found that spirituality is a very strong motivator for people to engage in pro-social and volunteer work (Nash & Stewart, 2002, p. 47), and the stronger the spirituality factor in individuals, the more altruistic and citizenship behavior they exhibit (Kazemipour et al., 2012). Given the non-obligatory nature of PEB, it is vital for organizations to know how to motivate employees to participate in activities that go beyond their normal work duties (Ones & Dilchert, 2012). Scholars believe that the combination of organizational and individual factors influence these behaviors (Paillé & Raineri, 2015).

a) *Workplace spirituality and employees' pro-environmental behaviors*

Research on workplace spirituality has increased significantly in the past two decades (Joelle & Coelho, 2017). As noted by Houghton et al. (2016), a commonly cited definition in the literature is by Ashmos and Duchon (2000) who defined workplace spirituality as "... the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community" (p. 137). Workplace spirituality shares a commonality with the emerging positive organizational scholarship field in focusing more explicitly on the humanistic aspect of work (Lavine, Bright, Powley, & Cameron, 2014) by seeking to more fully understand the human experience, including the drive for self-actualization (Joelle & Coelho, 2017), self-development, and more complete self-expression at work (Pawar, 2009). Workplace spirituality is seen as a multi-faceted construct influencing an individual's intrinsic motivation (Sharma & Hussain, 2012) and as involving one's "inner consciousness" and search for meaning (Houghton et al., 2016). A key theme of the literature on workplace spirituality is that people desire to not just be competent in their work, but also to have some other kind of

personally meaningful experience at work. This type of experience can involve a variety of aspects such as a sense of transcendence, meaningful and purposeful work, a connection to others or to a higher power, the experience of one's "authentic" self, being of service to others or to humanity, and belonging to a good and ethical organization (Milliman et al., 2017).

Benefiel et al. (2014) observed that workplace spirituality is seen as providing new insights into employee work attitudes and that a full understanding of organizational reality is incomplete without considering people's spiritual nature. The employee's experience of spirituality in the workplace is called workplace spirituality (Pawar, 2009). This concept refers to an employee-friendly work setting that cultivates and supports the spirit of the employees (Pandey et al., 2009). A moralistic and spiritual perspective encourages and motivates people to protect and conserve nature (Gatling et al., 2016). Workplace spirituality "is about feeling connected with and having compassion toward others, experiencing a mindful inner consciousness in the pursuit of meaningful work and that enables transcendence" (Petchsawang & Duchon, 2009, p. 461). Workplace spirituality enhances employees' self-transcendence values (Giacalone & Jurkiewicz, 2003) and motivates them to participate in activities that care for environment.

Workplace spirituality develops the sense of unity and connectedness among employees (Gatling et al., 2016). This sense of community motivates employees to demonstrate pro-social behaviors and care for others at work and makes them go beyond their own responsibilities and perform citizenship behavior (Kazemipour et al., 2012). Empirical studies have suggested that employees with a high sense of workplace spirituality are bound to exhibit OCB. Nash and Stewart (2002) state that spirituality is a strong motivator and a life-giving energy that spurs individuals to participate in volunteering for social works and acting in the social good for the welfare of others and the community. Many studies have asserted that the activation of concepts related to spirituality positively affects people's pro-social attitudes and behavior. Stead and Stead (2014) believed that sustainability has roots in spirituality. The literature also includes many references that assert the relationship between spirituality and environmentally sustainable behavior. For example, Pandey et al. (2008) explained that workplace spirituality is about finding harmony between one's self, the community and the natural environment. Csutora and Zsóka (2014) found a meaningful correlation between people's spirituality on the one hand and their environmental concerns and the sustainability of their lifestyles on the other. Furthermore, workplace spirituality nourishes the spirits of employees in diverse ways and makes them think about the wellbeing of society and the environment (Wierzbicki & Zawadzka,

2014). Since PEB is voluntary in nature and is considered as a type of organizational citizenship behavior towards the environment (Paillé & Raineri, 2015), and given the positive relationship between workplace spirituality and employee's organizational citizenship behavior towards the environment (Afsar et al., 2016), it is quite plausible to assume the following:

H1: Workplace spirituality is positively associated with nurses' pro-environmental behaviors.

b) Workplace spirituality and employee engagement

Employee engagement has been subject to a number of definitions. The construct was first defined by Kahn (1990) as involving one's "preferred self" and as "...the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). Engagement has also been viewed by Schaufeli et al. (2002) as involving an individual's full identification with his or her work, encompassing aspects such as (1) vigor (high levels of energy, enthusiasm, and resilience), (2) dedication (in-depth association with one's job involving significance, motivation, and challenge), and (3) absorption (being fully involved with one's work tasks). Engaged employees are seen as providing their full effort toward both their (1) main job tasks and responsibilities and (2) extra-role behaviors. Engagement is seen as a distinct construct in relation to other organizational behavior variables, in part because it involves one's full self in the experience of work and it impacts the performance of actual work tasks directly, rather than just work attitudes related to performance (Saks, 2011).

Meyer and Gagne (2008) called for more research to identify and explain the underlying human intrinsic motivation needs that lead to higher levels of engagement. Similarly, other researchers contend that greater attention should be given to the study of how employee engagement is influenced by the fulfillment of an individual's inner needs and through the experience of work meaning (Jung & Yoon, 2016) and work meaningfulness (Ahmed, Halim, & Majkd, 2016; Cartwright & Holmes, 2006; Chalofsky & Krishna, 2009; Shuck & Rose, 2013). Work meaning is defined as how an individual makes sense of and interprets what his or her work means within the overall context of one's life and needs. This construct refers to the sources of the work environment that influence one's sense of work meaning (e.g. job, coworkers, leaders, the organization's mission, etc.). Work meaningfulness is a related term that defines the amount of significance an aspect of work holds for a person (Pratt & Ashforth, 2003), including elements of work that involve intrinsic motivation (Shuck & Rose, 2013). Consistent with Rosso et al.'s (2010) observation that a person's sense of spirituality can influence his/her sense of work

meaningfulness and purpose, we postulate that workplace spirituality influences an individual's level of engagement. This view is supported by Saks (2011) and Izak (2012) who proposed that an individual's sense of spirituality at work can influence their meaningfulness at work, resulting in higher levels of engagement.

Similarly, other scholars contend that the pursuit of a spiritual experience at work leads individuals to seek their full potential and experience a greater sense of intrinsic motivation (Osman-Gani, Junaidah, & Ismail, 2013) and self-fulfillment (Pawar, 2009), which lead to increased engagement. Afsar et al. (2016) conducted the first empirical study of the relationship of engagement to workplace spirituality which was operationalized by three dimensions involving meaningful work, community, and alignment of organizational values. These dimensions are based on the research of Ashmos and Duchon (2000) and operationalized by Milliman, Czaplewski, and Ferguson (2003) involving an individual's perception of workplace spirituality at the following three levels: (1) the individual level - involving meaningful or purposeful work (including seeing one's work as a calling), (2) the group level - involving community or a sense of belonging to others at work, and (3) the organizational level - encompassing an employee's perceived fit between his or her personal values with those of the organization's values (including social and ethical aspects).

As noted in Benefiel et al.'s (2014) literature review, two or more of these dimensions have been examined in a number of workplace spirituality studies. These three workplace spirituality dimensions are conceptually similar to Rosso et al.'s (2010) observation that key sources of work meaning include a sense of community and group (involving a sense of shared identity and opportunities to contribute value to others), and the work context (including one's attitude toward his/her job tasks and organization's mission and values). As such, the workplace spirituality dimensions of meaningful work, community, and alignment of organizational values can be seen as one way that individuals experience intrinsic work meaning and in turn increase their level of engagement. Sharma and Hussain (2012) found a positive relationship between a combined report of these three workplace spirituality dimensions and the vigor dimension of engagement as measured by the Utrecht Work Engagement Scale (UWES) instrument (Schaufeli et al., 2002). A more recent study by Petchsawang and McLean (2017) found that four dimensions of workplace spirituality (meaningful work, compassion, transcendence and mindfulness) operationalized as a single higher order construct, was positively related to employee engagement as measured by the UWES instrument. While the Petchsawang and McLean (2017) and Sharma and Hussain (2012) studies provide important insights into the relationship of workplace spirituality to

engagement, we observe some limitations in them. First, as noted by Rich et al. (2010), the UWES instrument includes some survey items related to job challenge and meaningfulness that can confound engagement with work meaningfulness. This is a concern since both the Sharma and Hussain's (2012) and the Petchsawang and McLean (2017) investigations used the UWES survey in conjunction with the workplace spirituality dimension of meaningful work. Second, Sharma and Hussain's (2012) study had a relatively small sample size (60 managers) and its analysis involved only zero-order correlations. Third, the Petchsawang and McLean (2017) study involved only one dimension in common (meaningful work) with that of Sharma and Hussain (2012) and our study. We seek to build on these two investigations in two ways. One, to more fully examine the relationship of engagement to three dimensions of workplace spirituality (meaningful work, sense of community, and alignment with organizational values) which can be seen as being conceptually similar to key sources of work meaning as indicated by Rosso et al. (2010). Two, we seek to avoid the confounding of engagement with meaningful work by examining how these three workplace spirituality dimensions are positively related to Rich et al.'s (2010) operationalization of engagement which is based on Kahn's (1990) original definition of engagement (e.g. its cognitive, physical, and emotional elements).

Organizational commitment has been found to enhance employee's engagement in organizational citizenship behaviors directed towards protecting the environment (Daily et al., 2009; Mesmer-Magnus et al., 2012). Drawing on findings from a multinational corporation's case study, Biga et al. (2012) argued that employees who are more engaged are more likely to display direct pro-environmental behaviors on the job. These behaviors include working sustainably or exhibiting conserving behaviors (p. 371). Employee engagement is highly correlated with meaningful work, sense of "calling", humanism, and loyalty (Milliman, Gatling, & Kim, 2018). These antecedents are also components of the workplace spirituality. This suggests that workplace spirituality may lead to increased employee engagement. That is, those who feel their jobs as meaningful, purposeful, connecting with coworkers and other people associated with work, and find better alignment of one's core beliefs and the values of their organization may be more likely to reciprocate with increased employee engagement.

Fry (2003) notes that workplace spirituality aspects cannot be over looked by future organizations. Kinjerski & Skrypnek (2006) in their work, have given the four dimensions of workplace spirituality; (1) engaging work, a belief that one is engaged in meaningful work that has a higher purpose; (2) a spiritual connection, a sense of connection to something larger than self; (3) a sense of community, a feeling of connectedness to

others and common purpose; and (4) a mystical experience, a positive state of energy, a sense of exactness, transcendence, and experiences of joy and bliss". Workplace spirituality has become a basic need for every organizations (Jason et al., 2014). Duggleby, Cooper and Penz (2009) contend that workplace spirituality is associated with a sense of spiritual well-being that fosters a condition of hope which is linked to empowerment. The meaning attached to work, as well as experiences of psychological meaningfulness, leads to positive work outcomes (Pratt & Ashforth, 2003)25,26 and specifically work engagement (May et al., 2004; Olivier & Rothmann, 2007). Spiritual connections are "the deeply ingrained principles that guide all a company's actions; they serve as its cultural cornerstones," observes Lencioni, P. M. (2002), (p. 114). Collins and Porras (1996)11 point out that for the sense of community and spiritual connection truly have an impact; they must reflect the inner needs, beliefs, and aspirations of the employees.

Through the sense of calling, workplace spirituality instills a sense of meaningfulness to one's work with the organization and should foster employee engagement. This relationship can be explained by the fact that jobs providing a sense of meaning make people feel they work in an environment that conveys values compatible with their own. It is widely documented that the sense of belonging to a collective is positively associated with employee engagement (Milliman, Gatling, & Kim, 2018). Since organizational attitudes have been consistently linked to OCBs (Podsakoff et al., 2000; Tepper and Taylor, 2003), it follows that employee engagement may be a potential mediator of the relation between the workplace spirituality and each facet of OCB. Past research has also revealed a substantial relation between employee engagement and OCB in a variety of different empirical studies and workplace contexts (Milliman, Gatling, & Kim, 2018). As argued earlier that PEBs are OCBs directed towards the environment, the greater the level of workplace spirituality, the higher the employee engagement, and the greater the likelihood of PEB. Thus we may hypothesize:

H2: There is a positive relationship between workplace spirituality and employee engagement.

H3: Employee engagement is positively related to pro-environmental behaviors.

H4: Employee engagement mediates the relationship between workplace spirituality and pro-environmental behaviors.

c) Moderation by environmental awareness

The socio-psychological model of Stern et al. (1993), which is originally based on Schwartz's (1977) norm activation model, asserts the assumption that for individuals to exhibit altruistic behavior, it is essential that they have awareness about the results of

performing or not performing a behavior in terms of social harm. Individuals' knowledge on environmental and sustainability concerns is essential (Fryxell & Lo, 2003). Environmental knowledge signifies the method of situating environmental conditions in a sustainable balance through economic and social developments (Jamison, 2003). Previous studies have determined different factors affecting pro-environmental behavior. Kaplan (1991), for instance, indicated that awareness affects an individual's decision-making significantly. Commonly, people tend to keep themselves away from the situations which they do not know much about. Amyx et al. (1994) argue that people have a great deal of information about environmental issues; thus, they tend to expend more money on eco-friendly products due to high level of environmental awareness (Chan et al., 2014). Increasing knowledge regarding environmental issues may add to people's concern and awareness (Bamberg & Mooser, 2007; Zsoka et al., 2013). Kollmuss and Agyeman (2002) have identified environmental awareness as the comprehension of the impact of an individual's behavior on the environment. Generally, it seems that environmental knowledge, values, attitudes and tendency to actual behaviors, which are influenced by intentional and positional factors, are the most important aspects of individual environmental awareness (Zsoka et al., 2013). Some investigations suggest that an individual's pro-environmental behavior can be influenced by different environmental motivations such as knowledge, awareness and concern (Chan et al., 2014; Kotchen & Reiling, 2000; Mostafa, 2009; Perron et al., 2006). In fact, the more a personnel's knowledge regarding waste management such as recycling increases, the more they indicate sustainable green behaviors (Tudor et al., 2008).

Chan et al. (2014) pointed out that people's environmental awareness could enhance their green behavior. For example, individuals with higher environmental awareness purchase goods with eco-friendly labels, consume organic fruits and participate in recycling activities. Some people, after knowing the serious impacts of chlorine fluoride on the ozone layer, do not use hair sprays anymore. Another study also proved that awareness of the outcomes of recycling programs plays a significant role in a personnel's green behavior (Tudor et al., 2008). When employees are knowledgeable and well aware of the ecological degradation environmental issues and the importance of eco-friendly practices, they are more likely to actually show green behaviors (Afsar et al., 2016). Retrospective studies have asserted the significant role of environmental awareness in individuals' PEB and green consumption (Kim & Han, 2010; Ryan & Spash, 2008). Afsar et al. (2016) proved that the interaction of individuals' sense of responsibility and concern about the results of their activities (i.e., environmental

awareness) with their sense of community membership and meaningfulness in life (i.e., workplace spirituality) can activate their moral obligation and result in PEB. Moreover, numerous studies have indicated that when employees are aware of environmental problems, they are more likely to exhibit eco-friendly behaviors

(Crossman, 2011; Zilahy, 2004). Therefore, we hypothesize the following:

H5: Environmental awareness strengthens the relationship between workplace spirituality and PEB.

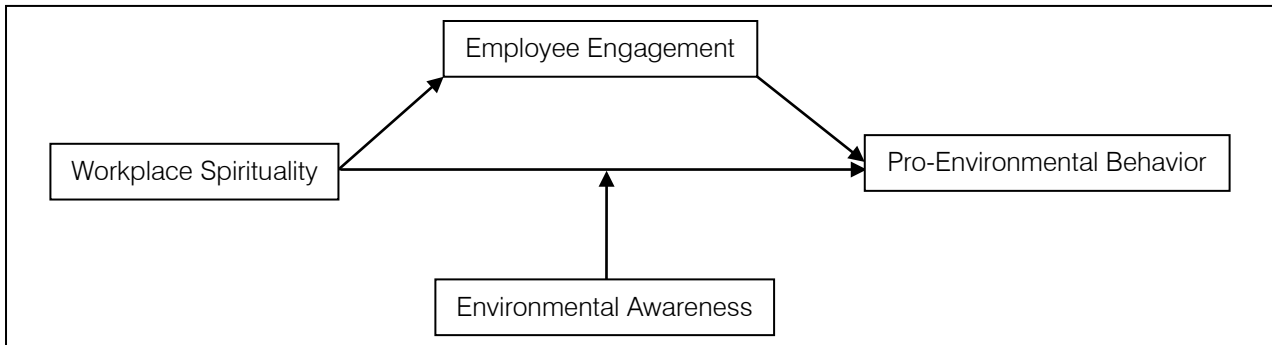


Figure 1: Conceptual Framework

III. METHODOLOGY

a) Sample and data collection

The targeted population was composed of all registered nurses who worked at nine public and general hospitals located in different cities of Pakistan, numbering around 2960 nurses. Prior permission was granted from the hospital management to conduct this study. In total, 17 hospitals were contacted but only nine agreed to participate in this study. The number of beds ranged from 200 to 800. A total of 700 responses questionnaires were distributed among nurses, out of which 365 were returned, out of which 16 were unusable. Consequently, 349 questionnaires were used for further analysis, a response rate of 49.8%. The demographic information of the respondents indicates that the sample was 88.4% female and that 40.2% of respondents were between 30 and 39 years of age. Almost 24% of the respondents' nursing experience ranged from 1 to 5 years, and about 32% of nurses had one to three previous nursing positions before working in these hospitals.

b) Measures

Workplace spirituality was measured with 12 items selected from the meaningful work and alignment with the organization's values survey scales of Ashmos and Duchon (2000) and the sense of community scale from Milliman et al. (2003). Employee engagement was operationalized through 12 items selected from Rich et al. (2010). The pro-environmental behavior scale developed by Robertson and Barling (2013) was used for this study. Sample items include "I print double sided whenever possible" and "I take part in environmentally friendly programs". EA was measured by four items from Ryan et al. (2008). A sample item from the scale was the following: "The effects of pollution on public health are worse than we realize". All constructs were measured on a five-point Likert scale.

c) Results

Prior to testing the hypothesized structural model of this study, a measurement model was assessed using confirmatory factor analysis (CFA) involving the eight constructs (i.e. meaningful work, sense of community, alignment with organizational value, physical engagement, emotional engagement cognitive engagement, environmental awareness, and pro-environmental behavior) (Anderson & Gerbing, 1988). The initial measurement model provided a good fit to the data: $\lambda^2(588) = 1584.38, p < .05, \lambda^2/df = 2.69, CFI = .924, IFI = .924, TLI = .918, RMSEA = .071$. These statistics met the standards considered necessary of a good fit for the Comparative Fit Index (CFI), Tucker-Lewis index (TLI), and Incremental Fix Index (IFI) with their values of .90 or higher, Root Mean Square Error of Approximation (RMSEA) value of .08 or less, and λ^2/df value of 3 or less (Anderson & Gerbing, 1988; Byrne, 2006; Hair, Black, Babin, Anderson, & Tatham, 2006).

This study used the three first-order workplace spirituality factors to create a higher-order (i.e., second-order) workplace spirituality factor and three first-order engagement factors to create a higher-order engagement factor. This second-order factor analysis was employed to create a more parsimonious and interpretable model with fewer parameters, as recommended by Gustafsson and Balke (1993) and Rindskopf and Rose (1988). This approach is also consistent with previous studies on workplace spirituality (Crawford, Hubbard, Lonis Shumate, & O'Neill, 2008; Gatling, Kim, & Milliman, 2016) and engagement (Rich et al., 2010). The second-order measurement model showed a good fit: $\lambda^2(467) = 1213.67, p < .05, \lambda^2/df = 2.59, CFI = .947, IFI = .947, TLI = .935, RMSEA = .067$. The results of the second-order factor analysis indicate that significant positive relationships between first-and second-order factors exist in both workplace spirituality

and employee engagement, as evidenced by high standardized factor loadings as follows for (1) workplace spirituality: meaningful work (MW), .93; sense of community (SC), .85; and alignment with organizational values (AOV), .86 and for (2) employee engagement: physical engagement (PE), .89; emotional engagement (EE), .84; and cognitive engagement (CE), .86 ($p < .05$). These results support that these first-order factors accurately represent the underlying concepts of workplace spirituality and employee engagement. That is, nurses tend to view (1) workplace spirituality as a combination of MW, SC, and AOV and (2) employee engagement as a combination of PE, EE, and CE.

The Cronbach's alphas of the four construct ranged from 0.86 to 0.91, which shows that the measures are internally consistent with the recommended criterion of 0.70. Convergent validity was evaluated by observing the Composite Reliability (CR) and Average Variance Extracted (AVE). Composite reliability values for all four constructs ranged from 0.81 to 0.88, which is greater than the minimum threshold value of 0.70 and AVE values ranged from 0.66 to 0.76, exceeding the acceptable value of 0.50. Next,

discriminant validity was assessed by determining whether the square root of every AVE value belonging to each construct is much larger than any correlation among any pair of latent constructs (Fornell *et al.*, 1981). The results showed that the square root of AVE belonging to WPS (0.76), EE (0.73), EA (0.66) and PEB (0.72) were greater than the correlation among any pair of constructs.

The means, standard deviations, and inter-correlations among research variables have been presented in Table 1. WPS correlated significantly with education ($r = .12, p < .001$), EE ($r = .28, p < .001$), EA ($r = .34, p < .01$), and PEB ($r = .44, p < .001$). Hypothesis H1 and H2 proposed that WPS will positively related to employees' PEB and EE respectively. As shown in Table 1, there is a significant positive relationship between WPS and PEB ($r = 0.44, p < .001$), and also EE ($r = .28, p < .001$), thus supporting the H1 and H2. H3 proposed that employee's EE is positively related to their PEB. The result shows that there is a significant positive relationship between EE and PEB ($r = 0.29, p < .001$), thus supporting H3.

Table 1: Descriptive Statistics

	Variables	M (SD)	α	1	2	3	4	5	6	7	8
1	Age	33.28 (4.38)		1							
2	Gender	.87 (.15)		-.02	1						
3	Tenure	6.48(3.92)		.35*	-.11**	1					
4	Education	14.68(2.19)		.03	-.14***	.04	1				
5	WPS	3.79(.56)	.86	-.04	.07	.14*	.12***	1			
6	EE	3.84(.47)	.89	.11	-.08	.03	.05	.28***	1		
7	EA	3.57(.31)	.91	.08*	.09*	.02	-.03	.34**	.17***	1	
8	PEB	4.12(.26)	.87	.18**	.04	.13**	.19**	.44***	.29***	.32***	1

Note: WPS for workplace spirituality; EE for employee engagement; EA for environmental awareness; PEB for pro-environmental behavior; * $p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed test).

The findings regarding the indirect effect of WPS on PEB via EE is summarized in Table 2. As mentioned before, H2 proposed EE as a partial mediator of the impact of WPS on PEB. Following Baron and Kenney (1986) model, in the analysis predicting EE, age, tenure and education entered in step 1 and WPS in step 2. For predicting PEB, age entered in step 1, WPS

in step 2 and EE in step 3. The results showed that when EE ($\beta = 0.21, p < .001$) was entered in the analysis, the magnitude of the WPS impact ($\beta = 0.46, p < .05$) on PEB decreased but, remained significant. Thus the findings showed that EE partially mediated the impact of WPS on PEB, supporting hypothesis 4.

Table 2: Regression Results: direct and indirect effects

Variables	EE				PEB					
	β	t	β	t	β	t	β	t	β	t
Step 1										
Age	-.04	-.15	-.06	-.32	.06	1.01	.04	.82	.05	.88
Education	.15**	3.32	.11**	3.01	.11**	2.62	.05	1.24	.05	1.24
Tenure	.12*	1.94	.12*	1.92	.07	1.19	.06	1.02	.04	.87
Step 2										
WPS			.23***	3.78			.48**	8.99	.46*	8.23
Step 3										
EE									.21***	3.64
F		6.97*		6.58**		6.88*		22.29*		19.19*
R ² at each step		.06		.08		.06		.21		.23
ΔR^2				.02				.15		.02

Note: * $P < .05$, ** $P < .01$, *** $P < .001$ (2-tailed test)

Table 3 shows the results of multiple moderated regression analysis to test H5, which proposed the interactive impacts of WPS and environmental awareness (EA) on PEB. Once again following Baron and Kenney (1986) model, first control variable was entered into the analysis; in the second step WPS was entered along with the EA to predict PEB. Then in step 3, the interaction terms of WPS and EA were entered. The results in Table 3 show the positive relations of WPS ($\beta = 0.43, p < .01$), EA ($\beta = 0.28, p < .001$), with PEB.

The analysis show that the joint effects of WPS \times EA ($\beta = 0.12, p < .001$) on PEB is significant, suggesting that EA increase the positive impact of WPS on PEB. In addition, the researches plotted the WPS \times EA interactions at two levels of EA (e.g., +1 SD, -1 SD; Bauer *et al.*, 2005) and conducted a simple slope test to test the nature of the interaction. The result shows that EA augments the positive impact of WPS on PEB. Therefore H5 was supported.

Table 3: Regression Results: Moderating Effects

Variables	PEB					
	β	t	β	t	β	t
Step 1						
Age	.05	1.27	.03	.74	.04	.82
Education	.11*	2.46	.06	1.18	.04	.93
Tenure	.08	1.25	.08	1.14	.07	1.13
Step 2						
WPS			.43**	7.91	.04	4.16
EA			.28***	4.27	.32	1.68
Step 3						
WPS * EA					.69***	3.95
F		7.86**		21.84*		18.29*
R ² at each step		.07		.24		.28
ΔR^2				.17		.04

Note: * $p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed test)

IV. DISCUSSION

This study examined the effects of workplace spirituality on employees' PEB and the indirect effect of EE on the relationship between workplace spirituality and PEB. The results of the study indicated that workplace spirituality was positively correlated with greater engagement in PEB. The findings also supported the mediating and indirect effect of EE on the relationship between workplace spirituality and PEB. That is, nurses who reported the experience of higher spirituality at work exhibited more engagement in PEB in the hospitals. Dutcher *et al.* (2007) also asserted the significant role of spirituality in motivating people to participate in environmental stewardship. As a result of this increased connection, which is associated with individuals PEB (e.g., Davis, Green, & Reed, 2009; Gosling & Williams, 2010; Hoot & Friedman, 2011; Zylstra *et al.*, 2014), for the first time in the literature it is proven that employee engagement also affects individuals' workplace PEB. This study contributes to the literature of sustainable organizational behavior by describing workplace conditions through which PEB can be fostered. The employees who can align their spiritual selves with the organization are more likely to display PEB. This study responds to the call of Raineri, Mejía-Morelos, Francoeur, and Paillé (2016) for the promotion of employee engagement in theory and practice as a precursor for PEB and to the call of Blok, Wesselink, Studynka, and Kemp (2015) for more empirical studies demonstrating employee engagement and the importance of PEB for a sustainable future.

Scholars have called for more research on how intrinsic motivation theory (Meyer & Gagne, 2008), including workplace spirituality (Sharma & Hussain, 2012) and work meaningfulness (Cartwright & Holmes, 2006; Chalofsky & Krishna, 2009), can provide insights into how employees become engaged in their work. This study found that employee perceptions of a higher order construct of workplace spirituality involving meaningful work, community, and alignment with organizational value was positively related to their level of engagement and contributes to the literature in several ways. First, it builds upon previous workplace spirituality and engagement studies (Petchsawang & McLean, 2017; Sharma & Hussain, 2012) which provided important insights into the relationship between these two constructs, but also contain some limitations. The most important contribution of the current study is that it addresses the potential confounding of the workplace spirituality dimension of meaningful work with the UWES measure of engagement used in previous research by utilizing Rich *et al.*'s (2010) engagement survey. In regards to Sharma and Hussain (2012), the current study utilizes a larger sample size and a more rigorous data analytic technique. In relation to Petchsawang and McLean (2017), our investigation uses three dimensions of workplace spirituality that have been found to be key sources of work meaning as noted by Rosso *et al.* (2010). As a result, the current study contributes to the literature in establishing how multiple aspects of workplace spirituality can influence engagement through the lens of work meaning. Specifically, the employees

who display greater levels of employee engagement try to protect the environment through sustainable behavior. However, the buffering role of environmental awareness in the relationship between workplace spirituality and employees' PEB should be taken into account as well.

The proposed framework is the first concerted engagement of spirituality and environmental issues in healthcare setting. This discourse can make tangible contributions to sustainability in hospitals. As spirituality is a universal phenomenon and engages every individual regardless of his or her religion or nationality, the adoption of strategies to disseminate spirituality throughout workplaces will be a game changer (Afsar *et al.*, 2016). However, as Faro Albuquerque *et al.* (2014) pointed out, epistemologically emotional and spiritual discourses have been marginalized in healthcare research.

While this study, to the best of our knowledge, is the first to test and report this specific pathway, the data pattern fits well within theoretical accounts of how workplace spirituality and EE might influence employee participation in sustainable behavior at work. We suggest that spirituality in the workplace can be a catalyst for organizations to achieve the ever-growing global demand for greening organizations. Developing spirituality in the workplace enables individuals to expand their consciousness to see the world free of constraints and to enrich their human relationships (Howard, 2002). Burkhardt (1989) stated that spirituality brings meaning in life and allows one to transcend beyond the present context. A sense of transcendence is a powerful reason for employees to consider future generations, which is in line with the notion of sustainability, or the belief that humans share a common future and should consider the benefits of future generations.

Lee *et al.* (2014) stated that workplace spirituality can be facilitated through respect, humanism and integrity within organizations. Thus, treating nurses accordingly can provide a spiritual climate in the workplace that motivates employees to aim toward self-transcendence, to go beyond their own selves and their own tasks, to care for the environment and align themselves with the organization's values. The current study adds to the emerging body of research contributing to PEB in work settings (Andersson *et al.*, 2005; Boiral & Paillé, 2012; Paillé & Boiral, 2013).

The current study proposes a number of practical implications. A first step that managers can take to promote a sense of workplace spirituality is to determine what aspects of work are most personally meaningful to their employees. As recommended by May, Gilson, and Harter (2004), managers can then attempt to fit employees to job roles that enable them to more fully express themselves, thereby leading to higher work meaningfulness and engagement. Such self-expression can also be enhanced by creating

opportunities for employees to provide more input on how to improve their work unit area and its greening strategies. This process of enhancing worker involvement and self-expression can also be extended to organizational level activities. For example, hospitals can communicate more clearly what organizational volunteering and greening opportunities are available and assist nurses in selecting initiatives that best match their particular interests. As suggested by Pratt and Ashforth (2003), such a process can promote a greater sense of community by creating deeper interpersonal connections among employees and between employees and their community. As the sustainable behavior of the employees at work is discretionary, workplace spirituality found to be a strong predictor tool through which the managers can indirectly provoke their employees to participate in such activities. However with regard to the impact of workplace spirituality on the employees' environmental behavior, the role of environmental awareness should not be underestimated. Providing employees with suitable environmental training is crucial to cultivate their awareness and knowledge and enhance their engagement in environmental behaviors (Bansal & Roth, 2000; Chan *et al.*, 2014).

a) *Limitations and future research*

The findings of the present research should be interpreted in the context of its limitations. Since contextual effects and cultural differences may affect individuals' attitudes and behavior towards environmental issues (Müller *et al.*, 2009) the findings of this study should be treated more cautiously, and future studies may replicate the proposed model in other settings. Cross-sectional nature of this study is another limitation. Workplace spirituality was operationalized in this study with three dimensions involving meaningful work, community, and alignment with organizational values that are consistent with variables found to be key sources of work meaning. Scholars should consider examining these three dimensions in conjunction with additional aspects of workplace spirituality from recent research by Petchsawang and McLean (2017) (e.g. such as transcendence among others) and Joelle and Coelho (2017) (emotional balance and inner peace) to provide additional insights into how workplace spirituality can influence employee engagement.

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An Empirical Study on the Determinants of Job Stress and its Coping Techniques among College Educators

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Abstract- Job stress continues to be a concern and research interest across occupations and professions. However, to date most studies have addressed the employees working in the corporate sector. There are some studies which have tried to explore the determinants of job stress and its coping mechanisms among educators. The analysis in the study based on a sample of 188 private college educators attempts to understand the differences in the level of stress and coping mechanisms taking into account various demographic factors such as age, gender, education, marital status. The analysis reveals that female educators undergo more stress than males and their coping mechanisms differ significantly with regards to age and marital status.

Keywords: *job stress, motivation, coping mechanisms, stress factors.*

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Dr. Indrajit Goswami ^α, Dr. Nigel D'Silva ^σ & Dr. Vijeta Chaudhury ^ρ

Abstract- Job stress continues to be a concern and research interest across occupations and professions. However, to date most studies have addressed the employees working in the corporate sector. There are some studies which have tried to explore the determinants of job stress and its coping mechanisms among educators. The analysis in the study based on a sample of 188 private college educators attempts to understand the differences in the level of stress and coping mechanisms taking into account various demographic factors such as age, gender, education, marital status. The analysis reveals that female educators undergo more stress than males and their coping mechanisms differ significantly with regards to age and marital status.

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I. INTRODUCTION

Job stress continues to be a concern and research interest across occupations and professions. Established theories help us to understand the fundamentals of the concept, models and determinants of job stress, and there is no much variation with regards to social appreciation and its different implications on our life, relationships and performance. However, experts in the domain and people across segments widely differ in their perceptions, beliefs, and experiences about the possibilities and potentials of different stress coping mechanisms. Unlike other issues or phenomena, the subject 'job stress' has drawn attention of researchers from across disciplines, such as social and behavioral sciences, economics, clinical psychology, psychiatry, medicine, yoga, and spirituality, etc. Several studies have been conducted to explore the sources and consequences of organizational job and role stress. The subject, particularly role stress among professionals, has a rich theoretical and empirical background in the Western world (Cooper, Cooper & Eaker, 1988; Howie, Porter & Forbes, 1989; Rout & Rout, 1993; Rout et al., 1997; Sutherland & Cooper,

1993). However, to the best of researchers' knowledge, few studies on role stress have been conducted in India.

It does not affect only the employees' work life, but has far-reaching impact on their family and social life as well. Schular R. S. (1980) defines 'Stress as a dynamic condition in which an individual is confronted with an opportunity, constraint or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important': Is it a consequential phenomenon? Or a conditional one to ensure better productivity and performance of people? Exploring evidence to such questions might divide our opinions, and due to the predominant existence of empirical studies in the domain, we narrowly fail to reach any customized solutions for people engaged in different occupations and professions. Perhaps, scholars will agree that ever-changing performance demands might be one of the most prominent factors responsible for job stress. The interest of researchers in the domain has been rising as the phenomenon is getting increasingly complex due to overt and covert relationships among several factors, including demography physical mental and intellectual ability; value orientation and attitude, ambition and purpose of life; priorities in life; self-perceptions; alertness and many others. Inevitably there are several other external factors which are beyond our control, such as employers' expectations and social aspirations.

The emerging societies perceive the role of teachers very differently when compared to traditional societies. The contemporary opportunities and challenges through technological advancements, proliferation of digital and e-learning platforms, demand for skill-based education, growing recognition for self-learning modules, etc. continuously posing threats to the conventional role of teachers. Both voluntarily and involuntarily teachers are pushed to adapting need-based and tech-driven learning mechanisms, where there is a growing influence of students and other stakeholders. The demand for activity-based and participatory learning has redefined the role of teachers from educators to learning facilitators. However, despite all such changes and transformations, the teachers have not yet lost their relevance. The provision of excellence in education system still depends on adequately qualified and skilled teachers.

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A couple of recent studies have been reviewed to understand how much and how far similar studies have already been done in the domain so that the scope for the present study could be defined.

II. REVIEW OF LITERATURE

Gandhi (2017) conducted a study on job stress of teachers working in self-financed colleges of Punjab and Rajasthan. A sample of 200 teachers was selected randomly from self-financed colleges. Occupational Stress Index (OSI) by Srivastava and Singh (1984) was used for investigation and measurement. The analysis was conducted with the aid of SPSS by utilising statistics such as mean, standard deviation and t-ratio. The study revealed that there was no significant difference in job stress among the respondents. However, it is pertinent to note that there is no mention about any prospective common or uncommon stress factors among male and female, and any significant difference in stress level among them.

Chatterjee (2016) assessed the occupational stress, job satisfaction and mental health of employees of banks and IT firms. The study reveals that work is infringing on the personal lives of the respondents and that affects their mental health. Evidence indicates that respondents prefer more balancing work and life than expecting job security and other benefits. The study concludes that it is more important to aid the employees to combat various dimensions of occupation stress and job dissatisfaction so that they can exhibit effective organizational citizenship behaviour and contribute to reducing attrition costs. However, the study has not yet looked into the differences among respondents about their individual coping mechanisms.

Majumder (2015) finds that occupational stress has a negative impact on both employees and companies. He mentions that in general people perceive teaching as a comfortable and stress-free job. But the facts revealed in the study alter the perception and confirm the existence of moderate to high level of job stress among teachers of private management colleges. The study throws light on factors responsible for occupational stress, the effect of stress and the coping strategies adopted by teachers in Kolkata, West Bengal. But there is no insight shared by the scholar about similarities and differences regarding respondents' stress factors and coping mechanisms across their gender, age-groups, subjects taught, etc.

Aftab and Khatoon (2015) in their study examined the relationships of a set of independent variables (gender, qualification, teaching experience, salary, subjects taught and marital status) with occupational stress among secondary school teachers. The sample in this study consisted of 608 teachers from 42 schools of Uttar Pradesh in India. The teachers' Occupational Stress Scale was used for measurement of stress level and t-test and F-test were used for

statistical inferences. Males displayed more occupational stress towards job than the females. The undergraduate teachers were found to have higher occupational stress than post-graduate and trained teachers. The findings of the study indicated a positive relationship between teachers' years of experience and level of stress. Teachers with longer experience have comparatively higher level of stress than the juniors. However, no significant difference was observed among monthly salary, subjects taught, marital status and occupational stress of secondary school teachers.

Nagra and Kaur (2014) in their study aimed at measuring the level of occupational stress and its relation to coping strategies with respect to their gender, subject streams and nature of the job. Occupational Stress Index and self-constructed Coping Strategies Scale were used to collect data from a randomly selected 200 secondary school teachers. Statistical techniques such as mean, standard deviation, t-test and linear regression were used for analysis. The results revealed that secondary school teachers experienced a higher level of occupational stress and moderately used coping strategies. Significant differences were found between teachers' occupational stress and their gender and nature of the job. But the study has not yet ascertained the difference between males and females regarding their age groups, stress factors and coping mechanisms.

In another study on faculty members in higher educational institutes, Rajarajeswar (2013) finds three most critical factors responsible for their job stress, such as teaching load, examination, and, administrative work. The scholar noted that most of the teachers show apathy towards non-teaching assignments and according to them those create anxiety led stress among them.

Through their research findings, Gomathi and Deepika (2013) indicate that employers' over expectation from employees may lead to short-term increase in their performance, but in the long run, it causes harm to employees' health and consistent performance. It is understood through the analyses and discussion in the study that an inclusive and participatory working environment may help employees dealing with stress, but no practical guidelines are suggested to create and sustain such environment. In a similar study, Nayak (2008) has affirmed that appropriate environment and support to each employee may help them reduce stress, but no concrete evidence has been given about how to customize such support. The scholar finds that there are variations in the experience of stress associated with work, role, personal development, interpersonal relation and institutional ambiance by the male and female degree college teachers. If so, any unitary approach may not be effective for employees with varied stress experience.

The above review reiterates the existence of stress among employees on different jobs across industries and professions. The measured stress factors have been found to be common with or without significant differences among males and females, teachers with different tenure of experience and subjects they deal with. Hardly, there is any study which can specifically mention unique stressors for males and females, and teachers with different other identities. Also, there has been hardly any attempt to investigate, (i) whether stress level and coping patterns differ across different age groups, marital status, teachers with different educational levels etc., and (ii) whether there is any association between teachers' social engagements and job stress. Sometimes, we may assume that teachers' stress experience may differ according to their motivating factors behind joining the profession. Do religious affiliations have any association with job stress? Whether traditional stress factors are still relevant or there exist any new stress factors? Such issues too are important and so deserve research attention. The present study has been planned to fill the above gaps and contribute substantially for better understanding the phenomenon. To fulfill the above purpose, the following objectives are formulated.

a) *Objectives of the Study*

- i. To understand different motivational factors of the educators.
- ii. To study the age, gender, educational level of educators and their association with job stress.
- iii. To know the type of hobbies, social, religious and spiritual activities of the educators.
- iv. To understand their stress factors, level of stress and different coping mechanisms.

b) *Null Hypotheses*

To fulfill the above objectives, following null-hypotheses have been formulated for testing.

H_{01} : There is no association between age, gender, and education of the respondents and their level of stress.

H_{02} : There is no association between age, gender and marital status of the respondents and their coping ability to overcome stress.

Table 1: Motivational factors for educators in choosing their profession

Opinion	Frequency	%
Social Respect	73	38.8
Passion	47	25
Remuneration	137	71
Role Model	56	30
Comfort	98	52.3
Others	32	17

Like other past studies, the present study attempts to ascertain if there is any statistical association between teachers' age, gender and

III. METHOD

The descriptive research design was used in the study. The data were collected from both primary and secondary sources. Firstly, an attempt was made to explore non-conventional causes of stress, if any, among the educators and their unique way of coping with stress. Later, the inputs obtained through exploratory study were incorporated to construct the questionnaire. Before the final use of the tool, it was pre-tested and modified to ensure validity. The link of the questionnaire was sent through email to 350 educators working in private or self-financed post-graduate institutions in Pune and Mumbai. Out of those, only 207 responded and only 188 had filled the questionnaire. Hence, the sample size for the study came out to be 188. The collected data were analyzed by employing the statistical tools like percentage analysis and Chi-square test.

IV. RESULTS AND DISCUSSION

a) *Job Stress and Determining Factors*

There have been numerous studies conducted to understand and describe the motivational factors for teaching professionals in schools, colleges and other higher educational institutes. Also, attempts might have been made to find out associations and correlations between teachers' motivation and students' performance. No one can ignore that teachers' motivation may directly or indirectly impact their performance, as well as of their students.

The present study reveals a very interesting finding. For instance, in (Table-1) 'remuneration' (and financial benefits on or through the job) appears to be the most prominent motivational factor for a larger majority (71 percent) of the respondents, followed by 'comfort' associated with the job (52.3 percent) and 'social respect' (about 39 percent). Teachers as 'role models' and their 'passion' may be perceived by people as some of the most important motivational factors for teachers. However, these factors were not so important in the study.

educational level, and their level of job stress. First, we analyse the distribution of respondents according to their level of stress, and then by conducting non-

parametric test, we will assess the association between three independent variables (age, gender and, education) and, job stress. If we observe the results in tables (1 & 2), we can assume that 'remuneration' as teachers' most cited 'motivational factor' has no determining role in keeping them stress-free on the job. About 78 percent (Table-2) of the respondents have expressed the prevalence of moderate to high level of job stress.

Table 2: Level of Stress of Educators

Level of Stress	Frequency	%
Low	41	21.8
Medium	69	36.72
High	78	41.48
	188	100

The respondents in the age group of 25-35 years appear to have more stress than their juniors and seniors. Why that particular age group is having more stress? There may exist several factors in and out of jobs, and to explore those, an interview method would be more effective. Taking into consideration the limitations, the study further explored the nature of association between age and level of stress. From the chi-square test results, it was found that the table value (Table-3A) is less than chi-square value, so the null hypothesis is rejected. Therefore, there is an association between age and stress level of respondents.

Table 3: Age and Level of Stress

Age	Level of Stress			Total
	Low	Medium	High	
< 25 Years	6	8	12	26
25-35 years	22	47	50	119
35-50 years	8	11	10	29
> 50 years	4	3	7	14
	40	69	79	188

Table 3A: Association between Age and Level of Stress

Age Groups	Chi -Square Value	Table value	Df	Results
	24.56	12.59	6	Significant at 5% level

In (Table-4) we find that male teachers (about 72 percent) have more job stress when compared to females (about 86 percent). It may be due to their dual roles, i.e., managing family and job together. We can infer from these findings that female teachers may find it difficult to balance their work and life when compared to their male colleagues. However, such propositions require further research and investigation to reach any decisive conclusion. However, the chi-square test (Table-4A) results show that there is no association between gender and, level of stress. The findings presented in the last two tables do not endorse each other which may warrant further research.

Table 4: Gender and Level of Stress

Gender	Level of Stress			Total
	Low	Medium	High	
Male	29	40	36	105
Female	12	28	43	83
	41	68	79	188

Table 4A: Association between Gender and Level of Stress

Gender	Chi Square Value	Table Value	Df	Results
	7.5	9.48	4	Significant at 5% level

Unlike gender, respondents' educational status has an association with their job stress (Table-5A). It was found that the respondents with higher level of education have comparatively more job stress than the others. The teachers with MPhil degrees (about 76 percent) have more stress than those with PhD. It could be due to the institutional and/or professional pressure on them to pursue doctoral degrees to survive and grow on their jobs.

Table 5: Educational Level and Level of Stress

Education	Level of Stress			Total	%
	Low	Medium	High		
PG	2	2	13	17	09.05
PG+ MPhil	30	59	53	142	75.53
PG+ Ph.D.	9	9	11	29	15.42
	41	70	77	188	100

Table 5A: Association between Education and Level of Stress

Education level	Chi-Square	Table value	D.F	Results
	11.42	9.48	4	Significant at 5% level

The findings presented in Table-6 revealed that the 'feeling of job insecurity', 'uncertainty about career development', 'inadequate vacations' and 'lack of students learning interests' were some of the most prominent stress factors perceived by the respondents. With the exception of the fourth important factor, the other factors cited by the respondents indicate that perhaps in most of the private institutions, the faculty members are deprived of getting adequate support and assistance to pursue their career goals. It could be inferred that many faculty members' are working either with the fear of losing their job or with inadequate provisions for availing 'vacations'. Moreover, such type of working environment will not encourage and facilitate the faculty members to pursue higher education.

Table 6: Causes of Stress

Causes	High	Moderate	Low
The feeling of Job insecurity	128	41	19
Lack of learning interest among students	102	67	19
Micro-management practices at the work- place	83	93	12
Uncertainty about career development	123	30	35
Irrational performance standards	78	87	23
Discomfort with non-academic assignments	67	59	62
Inadequate vacations	117	58	13

b) Respondents Stress Coping Mechanisms

Job stress may be prevalent across occupations and professions. Also, people may or may not be consciously aware about its existence and impact on their work and life. However, recognizing its inevitability, the management and related stakeholders must put concerted efforts to educate and sensitize people about it and facilitate them to acquire knowledge and skills to cope stress. A further probe in the study reveals that (Table-7) majority of respondents (about 60 percent) are optimistic and believe that coping with stress is possible. Another important finding of the study was that the respondents were trying on their part to minimise the negative effects of job stress in their life. It is pertinent to note that there is sufficient empirical evidence on 'stress management' as a concept and practice in the industry. However, it is not empirically evident in higher educational institutes.

Table 7: Stress Coping Possibility

Response	Frequency	%
Possible	112	59.57
Impossible	12	6.38
No response	64	34.1
	188	100

More than 90 percent of respondents enjoy 'reading' as their hobby (Table-8) and believe that it helps in overcoming their job stress. Also, as another coping mechanism, the majority of them engage themselves, either voluntarily or involuntarily, in serving society and needy (Table-9). About 70 percent (Table-10) believe that visiting their religious places and engaging into spiritual activities help them to cope with stress. In the next section an attempt has been made to test the associations between age, gender and marital status of respondents and their coping ability.

Table 8: Reading as Hobby

Reading As Hobby	Frequency	%
Always	91	48.40
Sometimes	83	44.1
Never	14	7.46
	188	100

Table 9: Educators' Engagement in Social Services

Type of Engagement	Frequency	%
Voluntary Service	43	22.87
Involuntary Service	145	77.13
Never	67	35.6

Table 10: Interest in Religious and Spiritual Activities

Type of Interest	Frequency	%
Profound Interest	74	39.4
Moderate Interest	59	31.4
No Interest	54	28.7

The analysis in the two tables (Table-3 and Table-11) throw up a very interesting results. It is evident from the tables that the respondents in the age group of 25-35 years are experiencing greater job stress (Table-3). However, at the same time it may be noted that they possess better coping capabilities with their respective stress levels. The calculated chi-square value (Table-11A) indicates the existence of significant association between respondents' age and their coping abilities.

Table 11: Age and Coping Abilities

Age	Low	Medium	High	Total
Below 25	0	10	16	26
25-35	23	48	49	120
35-50	3	17	7	27
Above-50	0	13	2	15
	26	88	74	188

Table 12: Association between Age and Coping Abilities

	Chi-Square	Table value	D.F	Results
Age	22.96	12.59	6	Significant at 5% level

However, while respondents' gender has no association (Table-4A) with their level of stress, it has a significant association with their coping abilities. If we observe gender-specific coping abilities, we can see that compared to females, males' coping abilities are much better (Table-13), and there is a significant association between respondents' gender and their coping abilities (Table-13A). Perhaps males have better advantages, regarding their freedom of choice and

liberty, and so they can cope with stress better than their female colleagues. But the scenario is different when we compare married with the unmarried respondents. The Table-14 indicates that when males are married, the couple together (87.7 percent, n=73) cope up with stress better than the unmarried respondents (85.21 percent, n=115). However, the calculated chi-square value (Table-14A) narrowly escapes the level of significance to claim their association, and it might be due to variance in the composition of male and females in the sample.

Table 13: Gender and Coping

	Low	Moderate	High	Total
Male	9	52	45	106
Female	17	36	29	82
	26	88	74	188

Table 13A: Association between Gender and Coping

Gender	Chi -Square	Table value	D.F	Results
	20.00	5.991	2	Significant at 5% level

Table 14: Marital Status and Coping

	Low	Moderate	High	Total
Married	9	31	33	73
Unmarried	17	57	41	115
	26	88	74	188

Table 14A: Association between Marital Status and Coping

	Chi Square Value	Table value	D.F	Results
Marital Status	5.561	5.991	2	Not Significant

In addition to the already discussed coping mechanisms, a few more have been surfaced through the probe. Table-15 presents different other important coping mechanisms, which according to the respondents are important stress busters. Those include *spending quality time with friends, spending time on social media (Facebook, WhatsApp, etc.), watching movie/listening music, playing with kids, playing games and swimming etc.,*

Table 15: Coping Mechanism

Coping Mechanism	High	Moderate	Low	Total (n)
Outing with friends	63	87	29	179
Cooking & shopping	27	53	19	99
Playing with kids	41	67	29	137
Games/swimming	31	57	23	111
Watching movie/ listening music	51	83	19	153
Networking on social media	57	93	13	163
Smoking & drinking	49	16	21	86

V. CONCLUSION

An interesting finding of the study was that the motivation for financial incentives was significantly contributing to the overall stress levels among the educators. Perhaps one could infer a paradigm shift from *‘teaching as a passion’* to *‘teaching as a career’* which could be a contributing factor to increased stress levels. Another significant finding was that female educators undergo more stress than male counterparts. Furthermore, married educators possessed better coping mechanisms than the unmarried. The study revealed that *‘feeling of job insecurity, ‘uncertainty in career, ‘inadequate leave, and ‘lack of student’s interest’* were the dominant stress factors. Finally, the study found that the educators perceived *‘spending quality time with friends and family, ‘social media activity, ‘playing with kids, ‘sports and games’* as the most important coping mechanisms.

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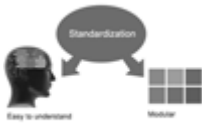


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TIPS FOR WRITING A GOOD QUALITY MANAGEMENT RESEARCH PAPER

Techniques for writing a good quality management and business research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice. Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.



Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.



Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

THE ADMINISTRATION RULES

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

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Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.



CRITERION FOR GRADING A RESEARCH PAPER (COMPILATION)
BY GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



INDEX

A

Ailment · 36
Altruistic · 67, 71
Ambiguous · 37, 50, 52
Anthropogenic · 66

B

Bureaucratic · 25

C

Catastrophic · 37
Confound · 70
Cynicism · 79

D

Depoliticization · 25
Depravation · 64
Discretionary · 78

P

Paquette · 18, 19, 23, 25
Paradigm · 32
Parsimonious · 73
Polyvalent · 22

S

Scientometric · 27
Snippet · 40
Syracuse · 25

T

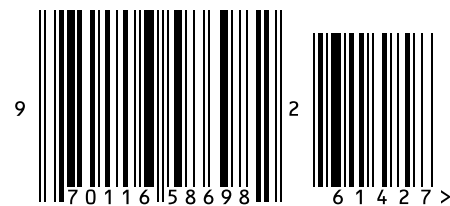
Transcendence · 67, 68, 69, 71, 77, 78



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