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PROBABILITIES OF EMPLOYED PATERNITIES TOWARDS CHILDCARE THROUGH IOT AUTOMATION

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ABSTRACT
Internet of Things (IoT) conceptualizes the idea of remotely connecting and monitoring real world things through the Internet. When it comes to our house, this concept can be aptly incorporated to make it smarter, safer and automated. Through IoT one can monitor his/her home by building a smart wireless home security system which sends alerts to the owner by using Internet in case of any human movement is sensed near the entrance of his house and raises an alarm optionally. Besides, the same can also be utilized for home automation by making use of the same set of sensors. The provision for sending alert messages to concerned security personnel in case of critical situation may also be built into the system. For example, if the child comes back from the school and the parents are still in the office, the gate of the house can be opened only after scanning the child's face and closed immediately when the child enters. Same way the house doors can also be opened and closed with the help of IoT, which provides a safety for the child.
Keywords: IoT Automation, Work life balance, smart security

Introduction

The need of Work-Life Balance took a sharp rise in the number of working women professionals having children in tender age-groups dependent on them. The demand for maintaining a work-life balance has risen unprecedentedly among the employees and the management has also acknowledged its importance in the current scenario. In these hypercompetitive times, stress and strain are common causes for concern for all employees. Given the fact that most employees work for twelve-hour workdays and more, it is natural that they begin to feel stressed out and tired because of overwork. This has the consequence of upsetting their physical and mental health as well as causing issues in their family life. When modern corporate professionals spend a majority of their time in the office including working on weekends, they have little time to spend with their families. The work life balance or the necessity to ensure that work does not suffer and at the same time, personal life does not suffer has now become the hot of the topic. The reason behind this may be because of lacking of care and affection towards the children. Safety and security of the children at home also stands next for one of the reasons for stress of the employees. There should be some solution to solve this problem.

Internet of Things (IoT) conceptualizes the idea of remotely connecting and monitoring real world things through the Internet. When it comes to our house, this concept can be aptly incorporated to make it smarter, safer and automated. Through IoT one can monitor his/her home by building a smart wireless home security system which sends alerts to the owner by using Internet in case of any human movement is sensed near the entrance of his house and raises an alarm optionally. Besides, the same can also be utilized for home automation by making use of the same set of sensors. The provision for sending alert messages to concerned security personnel in case of critical situation may also be built into the system. For example, if the child comes back from the school and the parents are still in the office, the gate of the house can be opened only after scanning the child's face and closes immediately when the child enters. Same way the house doors can also be opened and closed with the help of IoT, which provides a safety for the child.

Statement of the Problem

Many employed paternities feel stressed about the safety of their children. IoT is one of the best solutions that can be opted by the employed paternities for their child's safety. Whenever the child goes to school and returns in the evening, the employed paternities may feel unsecured about the safety

of their children at home till they return from the office. To analyse about what are the securities that the probabilities of employed paternities through IoT has been taken into consideration in this study.

Objectives of the Study

The main objective of this study is to identify the expectations of the employed paternities to take care of their children through the usage of IoT.

Methodology

Primary data and secondary data were collected. A structured questionnaire was framed and on convenience based random sampling method 250 respondents (employed paternities) residing in and around Pollachi Taluk in Coimbatore District, Tamil Nadu were chosen for the purpose of the study. Secondary data has been collected from journals and online websites. Simple Percentage and Fried Man Ranking has been used for the analysis.

Analysis and Interpretation

Table No. 1

Particulars	**No. Of Respondents**	**Percentage of Respondents**
Age		
20 Years – 40 Years	124	49.6
41 Years – 60 Years	119	47.6
Above 60 Years	07	2.8
Total	**250**	**100**
No. Of Members in the family		
1 - 3	132	52.8
4 – 5	115	46
Above 5	03	1.2
Total	**250**	**100**
Occupation (Self)		
Private employee	119	47.6
Government employee	47	18.8
Business	38	15.2
Agriculture	32	12.8
House wife	0	0
Professionals	14	5.6
Total	**250**	**100**
Area of Residence		
Urban	156	62.4
Rural	94	37.6
Total	**250**	**100**
Expectation of IoT		
Automatic message /Alert message in monitoring timings of Child's entry/late entry after schooling	89	35.6
Face Scanning in Gate and Front Door	92	36.8
Automatic recorded voice to be switched on when the door is opened	43	17.2
Sensor doors inside the house	26	10.4

The above table reveals that out of 250 respondents taken, 124(49.6%) are in the age group of 20 – 40 years, 119(47.6%) are in the age group of 41 – 60 years and the remaining 07 (2.8%) are in the age group of above 60 years. Regarding number of members in the family, there are 132(52.8%) respondents who are having 1 – 3 members in their family, 115(46%) respondents have 4 – 5 members in their family and the remaining three (1.2%) respondents have Above 5 members in their family. While considering the occupation of the respondents, 119(47.6%) of the respondents are private employee, 47(18.8%) respondents are government employee, 38(15.2%) respondents are doing business, 32(12.8%) are agriculturists and the remaining 14(5.6%) respondents are professionals. Most of the respondents 156(62.4%) reside in Urban area.

Most of the employed paternities expect certain IoT based automation may be implemented at their homes to take care of their children, which in turn reduces their stress. The following are the few expectations from the working parents:

Automatic message /Alert message in monitoring the timings of Child's entry/late entry after schooling:

Majority 89 (35.6%) of the employed paternities preferred to monitor whether their child reaches the home on time. For that purpose, with the help of IoT automation, Automatic message may be delivered to the parents' mobile when the child enters the gate or else alert message can be set when the child doesn't enter on time.

Face Scanning in Gate and Front Door of the House:

Out of 250 employed paternities, 92(36.8%) parents prefer to have face scanning entry in Gate and Front Door i.e., the faces of their family members who have the rights to enter into the house to be recorded and saved. Once when the recorded persons stand before the gate or front door of the house, the doors should be opened automatically and should be closed after their entry immediately which will be helpful for restricting the entry of unknown persons.

Automatic recorded voice to be switched on when the door is opened:

Majority of the respondents 43 (17.2%), prefer to have automatic recorded voice to be switched on when the door is opened. The content of the recorded voice preferred by the parents are "Welcome dears. Remove your shoes and socks. Wash your hands, legs and face. Take rest. Have snacks. We will come soon".

Sensor doors inside the house:

Most of the parents 26 (10.4%) prefer to have sensor doors inside the house, which they feel safety.

AWARENESS TOWARDS VARIOUS FACTORS IN IOT AUTOMATION

Awareness	HA	A	NA	Total	Mean Score	Ranks
IOT Implementation Procedures	118 (47.20)	72 (28.80)	60 (24.00)	250 (100.00)	5.64	1
Device Management	122 (48.80)	94 (37.6)	34 (13.6)	250 (100.00)	5.52	2
Continuous Monitoring	107 (42.80)	101 (40.40)	42 (16.80)	250 (100.00)	5.06	5
Consumer helpline number for any grievances	69 (27.6)	113 (45.2)	68 (27.20)	250 (100.00)	4.57	7
Advanced Technology	172 (68.80)	73 (29.20)	5 (2.00)	250 (100.00)	5.20	4
Data Privacy	185 (74.00)	49 (19.60)	16 (6.40)	250 (100.00)	5.25	3
Safety and Security	189 (75.60)	58 (23.20)	3 (1.20)	250 (100.00)	5.03	6
Risk Analysis	58 (23.20)	103 (41.20)	89 (35.60)	250 (100.00)	4.43	8
Network Segmentation	47 (18.80)	132 (52.80)	71 (28.40)	250 (100.00)	4.29	9

Above table reveals that employed paternities are highly aware towards the IOT Implementation Procedures, Device Management, Continuous Monitoring, Advanced Technology, Data Privacy and Safety and Security. Mean score is also found to be high with the IOT Implementation Procedures. Similarly employed paternities are aware towards the Consumer helpline number for any grievances, Risk Analysis and Network Segmentation. Hence it can be said that majority of the c employed paternities are highly aware towards the IOT Implementation Procedures and device management, which ranks the top most position also.

Findings

It is found from the study that IOT based Smart Security and Automation plays a vital role in Work Life Balance of employed paternities. Majority of the employed paternities prefer to safe guard and secure their child with the help of IoT.

Suggestions

It is analysed from the study that majority of the employed paternities prefer IoT automation at their houses. These automations can be made preferable at a valid price which would be affordable for the middle class people too.

Conclusion

Internet of Things (IoT) conceptualizes the idea of remotely connecting and monitoring real world things through the Internet. It is being implemented in many MNCs, educational institutions, industries, etc., But when it comes to our house, this concept can be aptly incorporated to make it smarter, safer and automated.

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