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Introduction of Security & Happiness by Design Methodology

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Security And Happiness By Design (SHBD) is a concept that emphasizes on the creation of environments, systems, and products that prioritize both physical and emotional well-being. It involves designing solutions that not only protect individuals from harm but also promote positive experiences and contribute to overall happiness. SHBD shifts the traditional framework from a preventive and reactive security mitigation model to one that is focused on creating user-centric environment, with a holistic approach of considering both physical and emotional well-being, surrounded by happiness through pro-active measures to address threats in advance and promote positive experiences. The best outcome is in the achievement of enhancement to security, while balancing ethical considerations, so that SHBD can be implemented in an ethical manner that respects individual privacy and rights, thus bringing happiness into the overall environment. Hence, SHBD is proposed as a new concept for design and development of security systems that is based on research findings in Psychology [1] and seeks to integrate happiness elements with the complexity of physical safety and protection into the holistic design concept of a facility, starting from the planning stage through the construction and operation phases (Figure 1). With the notion of an integrated digital delivery framework being adopted for the built environment, Building Information Modelling (BIM) can provide valuable design and construction data from BIM software like AutoDesk Revit or Bentley Revitso for the operational and asset maintenance phases, to ensure seamless stages transition and transfer of building or asset data. This ensures the successful delivery of a project that is designed to be well-maintained and secured through integrated facili-

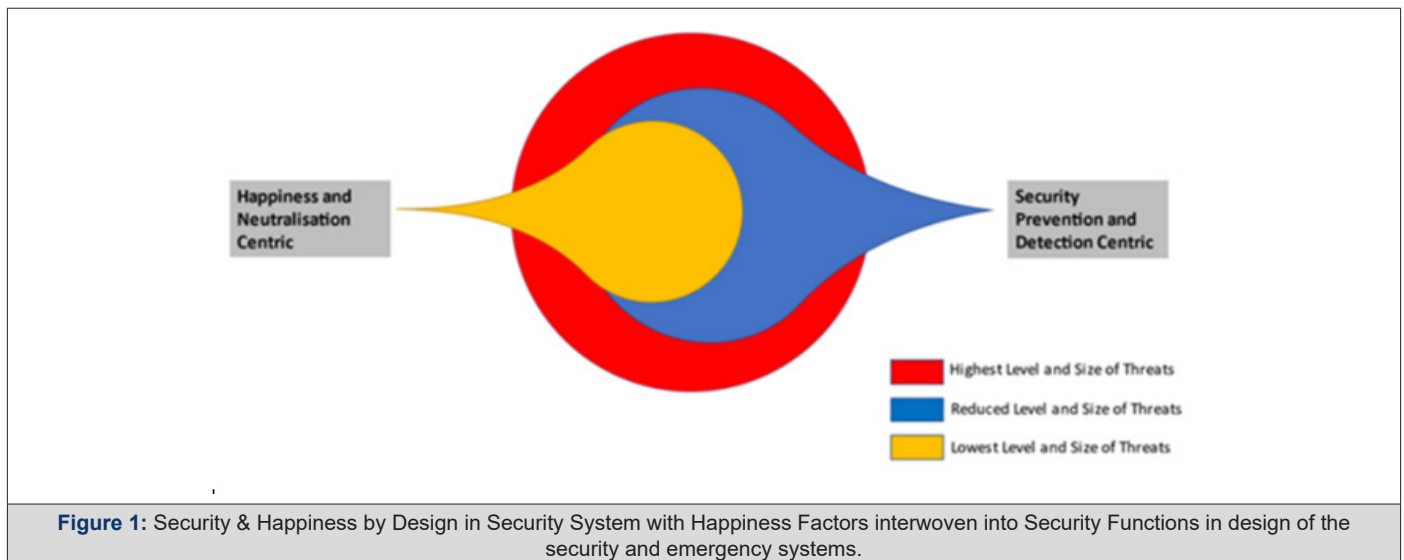
ties management for a positive occupant experience to be achieved. With the global threat scene becoming more and more volatile and unpredictable, local conflicts can be easily escalated into wider regional, and eventual global situations, cybercrimes are growing to be more prevalent and pose dynamic uncertainties to all security forces as compared to the traditional physical crimes. The targets of terrorist and criminal organizations, include most information infrastructure, and critical infrastructure of all nations. There is an anticipated surge in misinformation, disinformation, and mal-information campaigns through cyber means to instil fear, mistrust, and many other forms of emotional negativity. The physical boundary line of psychological impacts at only the front lines does not hold anymore and psychological defence is of higher paramount importance, especially during peace times. A new approach can be seen in using psychological defence through the promotion of SHBD, by simply focusing on the analysis of human behaviour and emotions instead of the heavy reliance on AI technologies to design security solutions that can potentially attract more severe cyber threats [2]. Just like the concept of Traditional Chinese Medicine (TCM), where the best source of healthcare is to manage one's living habits and be mindful of the real-time signal sent by the body, security designs and solutions can be as simple as leveraging on the analysis of human behavior and emotions.

As one of the critical infrastructures in every nation, both physical and cyber security of healthcare facilities are regarded as important design considerations. In our proposed SHBD concept, the key terminology is related to happiness elements which consist of three pillars, namely environment, physical safety and securi-



ty, and interpersonal relating [3]. Adopting a SHBD approach can create environments that are not only safe but also promote positive experiences and contribute to overall mental well-being. The design for healthcare facilities must focus on creating workplaces that promote both physical and mental well-being through using warm and appealing colour light settings for path guiding through security checks. Surveillance systems can also architecturally blend with the natural environmental or existing landscape designs, such that environment does not appear to be intimidating yet constant monitoring of the ground is possible. Incorporation of elements that stimulate the senses, such as artwork, plants, and soothing music at surveillance monitoring or security checks' location can also reduce the unnecessary tension of being treated as hostile or raise suspicions from the general public. In the past, healthcare facilities must be designed to have pervasive installation of surveillance cameras to monitor the patients and working staff, with the objective of attaining high levels of safety and security. While the results can reflect heightened security and safety, thus lesser occurrences of incidents, the long-term effects can be counter-produc-

tive where tensions of inter-personal relationships can inevitably increase, and stress level of the workplace environment can also climb up the charts. Rather than deploying dozens of surveillance cameras or increasing security patrols, leveraging on latest AI technologies like video analytics, biometrics or facial recognition solutions, ground responses will be incident-based and the higher level of preparedness of the security forces can be possible with the availability of real time data provision. The importance of SHBD is essential for creating a thriving and equitable society. Enhancement of social cohesion, especially in an environment when people feel safe and happy, allows the individuals to be more likely engaged in their communities and contribute positively to society. Future healthcare facilities design can adopt the SHBD framework by considering happiness elements in the optimized security risk assessment methodology for buildings under the security by design, which brings novel perspectives into the systematic framework of threat assessment, vulnerability assessment and consequence (impact) assessment.



In conclusion, SHBD advocates for security designs and solutions to be human-centered, user focused, that is sustainable and leverages on latest AI technologies, based on the integration of security and psychological research data analytics. The multiple benefits of adoption include creating secure and inclusive environments for all parties, fostering a sense of community and belonging. The enhanced mental management allows a sense of security and happiness to be achieved among community members, where economic development and operational optimization can thrive, thus providing a high quality of service deliveries for absolute positive user experiences.

Acknowledgement

None.

Conflict of Interest

None.

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