

DYSON: EMBARKING ON MEN'S MENTAL HEALTH

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ABSTRACT

Men worldwide are encountered on the regular with immense pressure and expectations from society and are often driven to a clouded state of mind that drives them towards the undertaking of radical actions, namely suicide. In recent times, there has been an evident increase in suicide and mental disorder records, a concerning matter that should not be disregarded. Sadly, there is a clear lack of effective wellbeing interventions in the space, specifically intended towards men. In an attempt to raise awareness, the project aims to support men through the development of an appropriate intervention.

Additional Keywords and Phrases: Men's wellbeing, mental health disorders, suicide

DECLARATION

"I proclaim that the following dissertation has been comprised entirely by myself, representing my own work except where otherwise stated by a reference or acknowledgment that the work is not my own."

ACKNOWLEDGEMENTS

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1. INTRODUCTION

1.1 DESCRIPTION OF TOPIC

From time immemorial, manhood has been bounded by an immense burden of expectations and challenges, an ensuing consequence inflicted by the allotted societal and cultural gender roles. In the act of becoming or being a man, an innumerable number of men internalize masculine ideals that can detrimentally influence their welfare, propel them to embark on radical actions and in rare occurrences even commit suicide. [1,5] Commonly associated with suicide is depression, and individuals suffering from this inflammatory disease can be driven to a clouded state, that when untended can corrode the productivity, sanity and ultimately the resilience of an individual. [6,8] Conversely women are in fact more presumably to engage in suicidal ideation and suicidal attempts, due to domineering levels of anxiety and depression. However without dismissing the endeavor of women, men in fact commit suicide more frequently due to the employment of lethal means when engaging in high-risk behavior. [2,5]

Out of about 5200 suicides recorded in 2021 in the UK, about three quarters were committed by men. [3] Dreadfully four in ten men withhold from discussing about their wellbeing and tend to not pursue the necessitated support, despite a great amount admitting to having suffered from symptoms of depression or other mental health problems at some point in their lives. [4,9] The reason is that men often encounter barriers that preventing them from accessing psychological health services, predominantly stigma surrounding perception of their traditional masculine values by friends, family, and so on. [1,7] Thereupon, upon measuring the urgency and significance of the matter at hand, deem the demand for proposals beyond existing mental health interventions, directed towards bridging the gap between men and necessitated support. [1]

1.2 MOTIVATION FOR TOPIC

In accordance with the World Health Organization (WHO), mental health conditions have increased by 13% in the last decade, [10] especially ensuing the isolations and restrictions introduced by the COVID-19 pandemic in 2020,

that deleteriously impacted the mental wellbeing of numerous individuals worldwide. [11] Homogeneously, male suicide rates have persistently snowballed, with suicide disclosed as amongst the prima causes of fatality, between the ages of 20-49. [12,13] Correspondingly, the role of mental health in men can be acknowledged of utmost significance, hence igniting the flame of ambition for undertaking this case study.

An ambition further rooted from an individual level, having witnessed depression first-hand through my recent journey with cancer. Despite early diagnosis and successful treatment, symptoms of anxiety and depression accumulated over the course of time, progressively deteriorating my mental wellbeing. Believing in my personal strength and resilience to overcome such trials, I declined and disregarded any psychological support, prompting social isolation and emotional instability. To date, even though complete recovery has been difficult to grasp, my masculine principles have remained unmovable when encountering and engaging with matters concerning mental health. Hence, this ambition lies in the hopes of reaching out to individuals incapable of withstanding such ordeals, or merely promoting awareness of the topic.

1.3 RESEARCH CONTRIBUTIONS

A project outcome refers to measurable improvements that can be perceived as beneficial by the intended audience. Beyond communicating the rationale behind a project, project outcomes are fundamental in the determination of whether the proclaimed project objectives have been successfully met. According to this definition, the intended outcomes anticipated to come into blossom include principally an optimal design solution that endeavors to improve the mental wellbeing of men. [38]

Accordingly, the project will contribute through an innovative artefact that permits the envisioning of unprecedented opportunities and foreseeable outcomes. Artefact contributions will be embodied in the form of high-fidelity or working prototype(s) that are substantially informed about the vision ahead. The prototype(s) will be deeply implemented within a broader system and can hence be considered components of a system solution. [37]

Conducting relevant user research and user experiments on the artefact can furthermore lead to empirical contributions, simply put, first-hand discoveries on systematically gathered data. An evaluation of the prototype(s) will be conducted with genuine participants to assess the impact on wellbeing, an opportunity to potentially grasp insights not previously wrapped by research, concerning the behavior of people to the demonstrated artefact. [37]

Collectively the aforementioned outcomes and contributions will be directed towards an effort to bridge the gap between men and mental health interventions. Accomplished through an artefact that employs the collective efforts and insights of previous case studies, and provision an improved vision of mental health interventions that especially accommodate the needs of men.

2. BACKGROUND AND RELATED WORK

In pursue of ambiguously investigating applicable strategies supporting the psychological wellbeing of men, a freeform technique was employed to permit the blossoming of inspiring and pure findings. Bearing in mind that the seeds of depression can be distinct from person-to-person [22], ranging from employment problems to the forthcoming of an infant [8], exploration of strategies did not conform to explicit requirements. The notion of this phase is the identification of common patterns in findings, with relative relevance to the topic.

2.1 INSIGHTS OF NOTABLE STRATEGIES

Preliminary investigation of case studies in the space uncovered that there is an evident absence of mental health interventions predominantly aimed at men, or rather ground-breaking interventions overall.

A. PARTICIPATORY THEATRE AND MENTAL HEALTH RECOVERY: A NARRATIVE INQUIRY [17]

The piecework entails the identification of probable mental wellbeing benefits from committed participation in a theatrical group. Performers were employed from a theatre company associated with a mental health rehabilitation programme and encouraged to disclose their personal experiences. The narratives conveyed public performances as an opportunity to uncover meaning from participating in activities valued by an audience, as well as an opportunity for transformational development through enactment of influential and distinct characters. The act of an

essential role in the production process was depicted as fundamentally crucial in the enhancement of a sense of social belonging.

B. SHOULDER-TO-SHOULDER: HOW PINBALL SUPPORTS MEN'S WELLBEING [16]

The study concerns the advancement of mental health interventions that men perceive favorably, typically grounded in joint playful or physical actions, established within engaging settings. Pinball, an arcade machine that supports a collection of predominantly male social participation, was contemplated for the potentiality of incidental benefits through social appropriateness. Participant dialogues unveiled that men feel more comfortable to disclose adverse subjects when conjointly undertaking instrumental activities. The “work of working together” acts as the proxy for social communication and interaction, that can lead to the formation of newfound relationships. Fundamental to the health of such groups is the facilitation of social third spaces.

C. SERIOUS GAMES FOR PROFESSIONAL SKILLS: THE DESIGN OF AN ESCAPE ROOM TO EXPLORE THE POSSIBILITIES OF EMENTAL HEALTH [18]

The publication exhibits the adaptation of therapeutical technologies by mental healthcare professionals, through the employment of gaming techniques to cultivate their relevant proficiency. Escape rooms, secure and interactive environments encompassing puzzle solving, are proposed to simulate engaging learning experiences emerging from real-life. Prominent theoretical considerations embraced the conception of a collaborative learning experience, that engages professionals through adequate content with plentiful choices and chances for accomplishment. A learning experience with clear-cut objectives that establish the benefits of professionals as well as patients. For that reason, game elements are to be tailored to accommodate the withheld expertise of professionals, as well as the preferences of patients.

D. COLOR ME: A GAME BASED ON ART THERAPY FOR MENTAL HEALTH [19]

The piecework reviews the employment of stress mitigating mechanics and interactions, to augment conventional stress management treatments that fend off the accumulation of inhibited adverse emotions. Color Me was accordingly designed, a smartphone game encapsulating the physical act of balloon painting, permitting players to engage in objective directed activities that prompt the need for achievement. Gameplay concerns enveloped the significance of a story and theme that facilitates safe venting, channeling away from real-life matters. Deeming fundamental that the pace of advancement to be determined by the player, while game environments to be competent in orchestrating comforting tones.

E. SOCIAL VIRTUAL REALITY AS A MENTAL HEALTH TOOL: HOW PEOPLE USE VRCHAT TO SUPPORT SOCIAL CORRECTNESS AND WELLBEING [11]

The study endeavors to comprehend the elongated influence of social virtual reality on mental wellbeing, hopeful of recommending a remote solution for people suffering from isolation and solitude. VRChat, an MMO social VR application featuring a collection of community generated virtual content, is introduced as therapeutic exposure to remediate mental disorders. Community members conveyed that the anonymous secure environment of VRChat improved their confidence in communicating and interacting with unfamiliar people, subsequently overpowering their insecurities. Thru certain associations, they became adequately competent to embrace their emotions and discover themselves, instigating changes of character that progressively carried over to the offline world.

F. DESIGN OPPORTUNITIES FOR DIGITAL MEN'S HEALTH: AN EXPLORATORY STUDY FOCUSING ON FOOTBALL FANDOM [1]

The publication examines the blueprint of healthy lifestyle programs to develop mobile health technologies that effectively contact and empower men to embrace positive health behaviors within a masculine space. Football and in particular football clubs, predominantly associated with men, were employed as an expedient tool to run prototypes incorporating applicable behavioral change techniques. Assumptions uncovered that a community of interests enables social engagement between fans, that can perchance lead to the formation of deep-rooted bonds.

Competitive play was favored over collaborative play, despite receiving criticism about the negation of the benefits associated with social correctness, in essence prompting an “animalistic” mindset.

G. MINDNOTES: A MOBILE PLATFORM TO ENABLE USERS TO BREAK STIGMA AROUND MENTAL HEALTH AND CONNECT WITH THERAPISTS [7]

The piecework plunges in the exploration of mental health management platforms that eradicate barriers that interfere with the foraging of necessitated professional support upon experiencing intensified symptoms. MindNotes was thus brought forth, a mobile application that empowers the identification and regulation of minor mental health concerns, namely adverse sentiments, and conjointly challenge identified barriers. In the interim, reluctance surrounding the effectiveness and employment of therapy is confronted with gradual exposure to genuine healthcare professionals, recommended in correspondence to the severity of symptoms. Besides the unremitting accessibility of healthcare professionals, helpline numbers and other relevant services can further be accessed through the app.

H. THE POTENTIAL OF VIDEO GAME STREAMING AS EXPOSURE THERAPY FOR SOCIAL ANXIETY [20]

The study investigates the effectiveness of live streaming in the treatment of social anxiety, with the aim of enhancing social connections, an interdependent element to wellbeing. Digital game streaming, the act of streaming gameplay to an audience, is recommended as therapeutic exposure of modelled intimidating social scenarios, situated within a monitored environment. The properties of streaming are indicated as ideal for the adjustment of exposure intensity, an experience that can be indorsed by the immersive nature of games. Spectators can concurrently interact with the stream and the community surrounding the content, namely asynchronous live chatrooms, circumventing intimate direct communication.

I. CAN CHATBOTS HELP SUPPORT A PERSON'S MENTAL HEALTH? PERCEPTIONS AND VIEWS FROM MENTAL HEALTHCARE PROFESSIONALS AND EXPERTS [21]

The publication probes the usefulness of digital assistant tools premediated for the fortification of mental health services, backing professionals in leu of superseding them. Perceptions from healthcare professionals were drawn about the use of chatbots, predominantly featuring computer programs replicating human communication. Chatbots were deemed excellent in eradicating relevant accessibility or comfortability barriers, withal enhancing the quality of mental healthcare. Albeit chatbots were rendered positively, these tools were deemed incompetent to envision un verbalized emotions or unknown factors, that can hamper judgement laid upon the patient. Not to mention that abusing the consumption of chatbots can catalyze a dissociation among healthcare professionals and patients.

J. IDENTIFYING COMMERCIAL GAMES WITH THERAPEUTIC POTENTIAL THROUGH A CONTENT ANALYSIS OF STEAM REVIEWS [23]

The piecework explores prominent commercial games as a therapeutic self-supporting tool, for the treatment of mental disorders. Commercial games were acknowledged to be positively connected with positive effects to wellbeing, through the fulfillment of basic psychological demands and supporting people to cope with life. An analysis of user reviews unveiled confessions describing probable mental health benefits, from the employment of games to merely loosen up to the regulation of their emotions and thoughts. Alongside these confessions, people further disclosed mechanics, dynamics and aesthetics that contributed towards the enhancement of their wellbeing, such as challenging gameplay that necessitates perseverance through failure.

2.2 DISCUSSION OF STRATEGIES

Strategies denoted a deep connection between the flourishing of an individual and people coming together, striving towards a common objective, or merely sharing the same interests. Broad findings uncovered that men have a strong preference for strategies that incorporate an activity and tend to refrain from strategies that focus on the enhancement of individual wellbeing. [16] Therefore, with a community of interests that encompasses at the core collaborative work, the formation of newfound relationships was depicted to be positively encouraged, hospital connections that can progressively enable men to disclose adverse subjects between them. Bearing in mind that

men have immense difficulty expressing themselves, an intervention harnessing the power of a community was exhibited to be utterly appropriate.

Howbeit, communities offer a multitude of incidental benefits. To put it into a simpler perspective, behavioral change through community empowerment is a phenomenon that can be detected even with wild animals as well, as humans share a collection of traits with them. An experiment conducted on rats in the 1970s is an excellent example showcasing the benefits from belonging in a community. The experiment encompassed a rat isolated in an empty cage, and a bulk of rats in the so-called Rat Park, an accommodation colony that incorporated residence, food, interactive objects, and most importantly substantial space to interact. Both facilities were emplaced with two bottles, one containing pure water and the other drug laced water. The outcome of the experiment was the inevitable dependence and overdose of the singular rat, while the residents of the Rat Park abstained completely from the consumption of the drug laced water. [14,39] A truly inspirational example resembling closely human behavior and the cultivation of the necessitated conditions that spark the drive for existence. [17]

On a different note, predominance of strategies explored encompassed gaming at their core, an approach seemingly effective and stimulating, and particularly popular amongst men. Games facilitate a collection of wellbeing benefits through engagement, cognitive functioning and visuomotor functioning. [24] Taking into consideration that gaming contexts appeal to men, a game solution was deemed an ideal component to be employed. [16]

2.3 GAME CHARACTERISTICS FOR WELLBEING

In accordance with literature reviewed the ensuing characteristics have been established, indicating some broad guidelines, with relevance to the enhancement of individual wellbeing, that the prototypes should conform to. These characteristics have been divided between functional requirements (FR) and non-functional requirements (NFR).

FR1: Cooperative gameplay (High priority) – Gameplay that encourages participants to work together as teammates to accomplish certain objectives.

FR2: Competition (High priority) – Competitive scene and modes encouraging engagement from participants.

FR3: Player role (High priority) – Availability of unique starring roles for participants to select from.

FR4: Strong theme and narrative (High priority) – Theme and narrative that strikes an impression and encourages player immersion and involvement.

FR5: Low skill floor (High priority) – Gameplay that requires no exceptional skills or investment from participants to be truly experienced.

FR6: Rewards (High priority) – Incentives that encourage continuous engagement in return for pleasure.

FR7: Score system (Medium priority) – Objective encompasses the scoring of the utmost points without failing.

FR8: Customizable elements (Medium priority) – Appearance options that can be selected by participants.

FR9: Strategic gameplay (Low priority) – Gameplay with outcomes that depend on the actions of teammates.

NFR1: Safe venting (High priority) – Gameplay should not instigate adverse emotions in participants.

NFR2: Mild competition (High priority) – Competition should not instigate unhealthy or toxic gaming behaviors.

NFR3: Self-regulating progression (High priority) – Progression should be performed at the pace of the participant.

NFR4: Player anonymity (High priority) – Participant ID should be retained as confidential from other participants.

3. METHODOLOGY

3.1 GENERAL CONCEPT STRUCTURE

The project recognizes that men encounter countless barriers that prevent or discourage them from accessing psychological health services, and typically refrain from expressing their emotions and thoughts. Agreeable statements evident in the distressing ascent of mental health conditions, accompanied by an individual journey with depression and chronic stress. On that account, the project aims to confront and prevent the escalation of mental health conditions by designing a secure and comfortable environment for men to flourish in.

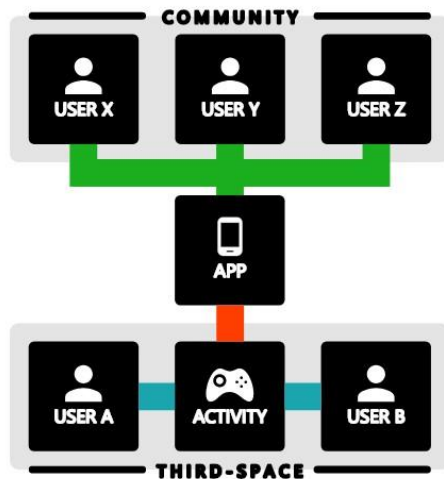


Figure A: Initial low-level concept structure

In accordance with research conclusions, one discreet and predominantly male appealing tactic would be through a game-based intervention that can facilitate a gaming third space for men to socially connect and interact. Such an intervention would provide men with multitude of therapeutical opportunities for regulation and support of their mental wellbeing, that can manifest from the game, interactions associated with the game, newfound associations, or even merely the environment. [23]

Figure A exhibits the concept structure of the tactic. User A and/or B can be viewed as the intended audience, that can connect through their participation with an activity-based intervention, facilitated within a third space. To permit both users to connect with other members of the community, a mobile app will be offered to enable and augment those interactions.

3.2 AIM AND OBJECTIVES

The research study aims at conducting an in-depth investigation of the underexplored space surrounding men's mental health, and based on findings iteratively produce a game-based design that endeavors to improve the mental wellbeing of men.

- C1.** Review (i) literature on men's mental health, (ii) SotA literature on prevalent strategies that appropriately support men, and (iii) literature on evaluation techniques to be employed.
- C2.** Develop a concept based on conclusions procured from the desk-based studies and concurring elongated review of relevant literature.
- C3.** Develop a high-fidelity application prototype and a working game prototype, in accordance with the concept.
- C4.** Conduct a provocative social media post to gather general feedback on the prototypes.
- C5.** Conduct an expert and evaluation to assess the probable wellbeing effects of the prototypes, through the employment of a well-established wellbeing model or theory.
- C6.** Conduct a participatory evaluation of the prototypes to assess the probable wellbeing effects of the prototypes.

3.3 APPROACH

Due to the nature of the topic, particular emphasis is demanded on the encapsulation of the utmost positive wellbeing effectives, through the deliverance of a well-informed design. Fundamental to the development process is the design of a companionable artefact that resonates and exhibits empathy for the acknowledged consumer population. Thereupon research should adequately reflect on human considerations, namely necessities,

complications, and preferences of genuine consumers. Likewise, assessment of the artefact should be performed with actual participants. [15,28]

Undoubtedly the heightened sensitivity of the subject further necessitates the accommodation of a sequence of requirements surrounding a constrained audience from the overall consumer population. Put simply, habituating the artefact to the wellbeing demands of men. [29]

3.4 TOOLS AND TECHNOLOGIES UTILIZED

| Tool | Description of tool | Purpose of employment | Available at |
|----------------|-------------------------|----------------------------|---|
| Krita | Digital painting tool | To create concept sketches | - |
| Wombo | Image manipulation tool | To create graphics | https://dream.ai/create |
| Befunky | Photo editor tool | To edit graphics | https://www.befunky.com/create/ |
| StoryboardThat | Storyboard creator tool | To create storyboards | https://www.storyboardthat.com/ |
| MockUPhone | Device mockup tool | To create mobile | https://mockuphone.com/ |
| Unity | Game engine | To create game prototype | - |
| Blender | 3D Modelling tool | To create game assets | - |
| Adobe Xd | Prototype design tool | To create app prototype | - |
| Lucidchart | Diagramming tool | To create an HTA diagram | https://lucid.app/ |
| CapCut | Video editor tool | To create game promo vids | https://www.capcut.com/ |

3.5 RESOURCES

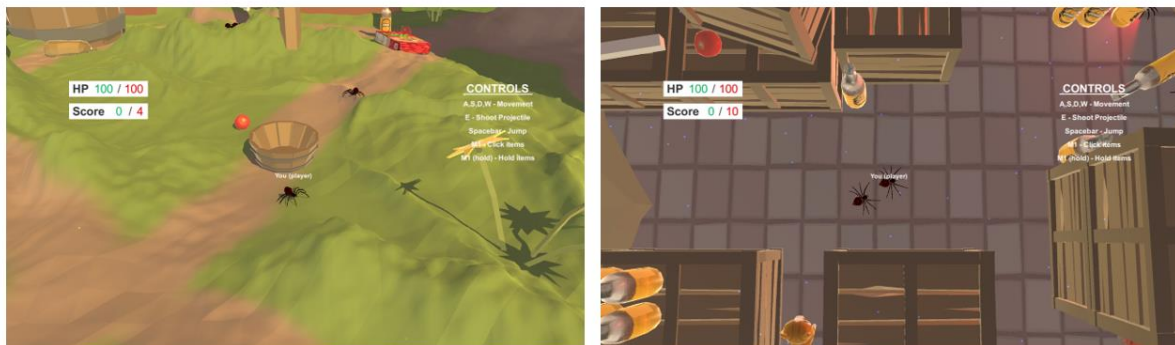


FIGURE B: Unity game "HantER" created from module CSC3232

To speed up the development process of the game prototype, a 3D platform game created in the module CSC3232 of my BSc Computer Science degree was employed. This project provides influential and insightful feedback on the employment of physics, artificial intelligence, design patterns, visual effects, audio, and overall gameplay. The project was substantially augmented and expanded upon, accommodating the needs for this case study.

3.6 WHAT WAS DONE AND HOW

Comprehending thoroughly the conclusions reached in the background phase of the study, inspiration was therefore heavily influenced by the pinball publication explored, an approach that qualifies the requirements drawn. Rather than expanding upon related communities within the space, and upon observation of a lack of arcade machines that could potentially serve as an intermediary tool to the goal, an arcade machine game was determined to be developed from scratch. An attempt to create an innovative game harnessing a time from the past while adapting to the new age, reaching an extensive audience from distinct generations.

ACTIVITY A – NARRATIVE CRAFTING

A narrative was produced to enable worldbuilding, a process that permits the building of a fictional world. The setting is crafted for all ages, with opportunities for playful and mature elements.

“In the distant future, humanity has successfully managed to encapsulate the power of stars by constructing artificial habitats known as Dyson spheres. Someday unknown entities began emerging from the horizon of black holes, launching an invasion for control of the stars. On the brink of collapse, a force of space rangers emerged to liberate the stars and regain control.” [42,43]

Thereupon came about “Dyson: Beyond the Horizon”, an optimistic game that encourages players to enroll in the ranks of space rangers and oppose endless waves of hostile enemies, in the hopes of a better tomorrow.

ACTIVITY B – REFERENCES GATHERING



FIGURE C: Concept references

Commercial games, beloved by the gaming community were studied to draw inspiration for the design of a well-perceived concept. Popular titles such as “Ratchet and Clank”, “Minecraft” and “Overwatch” were employed due to pristine design of environments, characters, elements, etc. that immerses and engages players with the game world.

ACTIVITY C – COLORS SELECTION



FIGURE D: Color wheel model exhibiting triad colors

Chromotherapy was profoundly considered in this process, a type of therapy surrounding the employment of specific colors to manipulate or build a mood, educe emotions, or help reach mollified state. Ultimately, the usage of colors can shape behavior, and subsequently support the treatment of mental disorders such as anxiety and depression.

In an attempt to arouse a positive state of inner peace and calmness, triad colors were utilized, colors that formulate an equilateral triangle on the color wheel, as exhibited in figure D. Yellow and orange are stated to be stimulating colors associated with happiness, whereas blue a cold color associated with tranquility. Bearing the aforesaid, purple was ultimately selected. [40,41]

ACTIVITY D – GAME CONCEPT SKETCHING

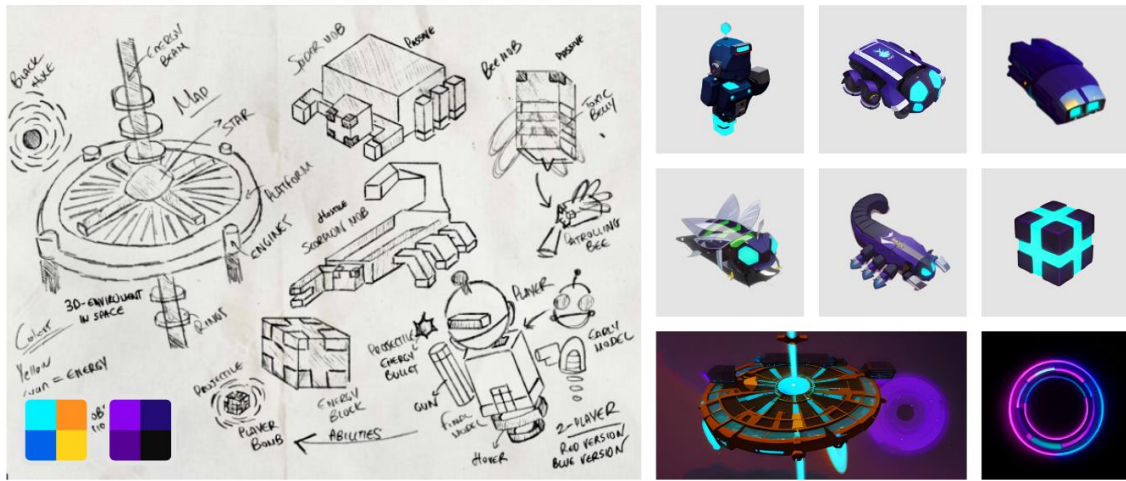


FIGURE E: Concept sketching and graphics

Preliminary designs were sketched to graphically envision and explore the concept at hand, specifically prominent elements such as characters, the virtual environment, mobs, color, arsenal of weapons and equipment, etc. An AI art generator was subsequently employed to transform the detail clarity and settle on the envisaged outcome.

ACTIVITY E – GAME PROTOTYPE DEVELOPMENT

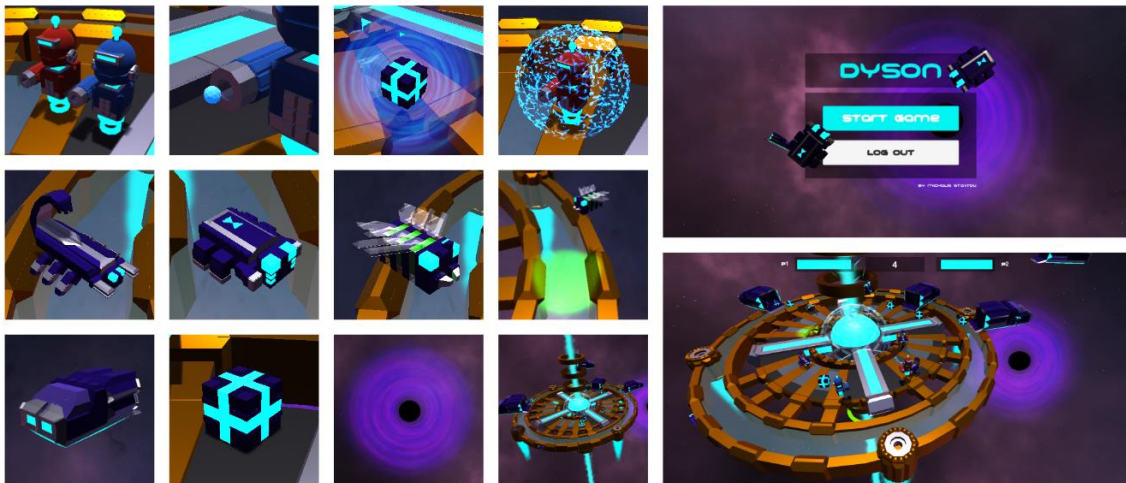


FIGURE F: Unity game prototype (Available:

As aforementioned in the resources section, the unity game project was employed to hasten development. The gameplay surrounded a 3D single-player top-down shooting game, comprising of a collection of levels, objectives, enemies, etc. Hence, the format was retained with the introduction of a local multiplayer element that would permit the participation of two players. Nonetheless, in agreement with concept sketches and graphics, 3D game assets were modelled afresh with the sole exception of the imported skybox asset from the unity asset store.

In terms of gameplay, the constrained time schedule permitted the development of a singular cooperative survival game mode. This game mode comprises of two players situated in a 3D environment and tasked with enduring endless waves of mobs in an attempt to score a high score. As exhibited in figure F, players can choose between two starter characters, each capable of shooting projectile bullets and equipped with distinct abilities (e.g., unleashing EMP bombs, deploying shields). Meanwhile, three distinct enemy mobs can roam the field, a common “scorpion” type capable of close-proximity damage, a scouter “bee” type that patrols the field and coordinates other nearby mobs, and lastly the passive “spider” type that has not been assigned any offensive capabilities.

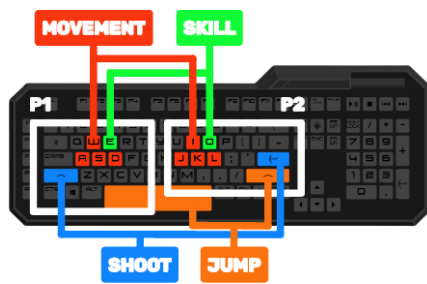


FIGURE G: Player input from a computer keyboard

To resemble classic 2D games, considerations were emplaced that would not deviate from that outcome, namely the simplification of the design style. Besides the appearance of the game, of equal importance was the replication of player input, a detrimental element of arcade machine games. Although an arcade machine was not within the ground plan, alternatively a computer keyboard was adjusted appropriately for player input. Figure G showcases that a keyboard was employed to simulate two separate arcade control panels. Sadly, due to complications encountered, employment of gamepads had to be discarded.

ACTIVITY F – ARCADE MACHINE CONCEPT

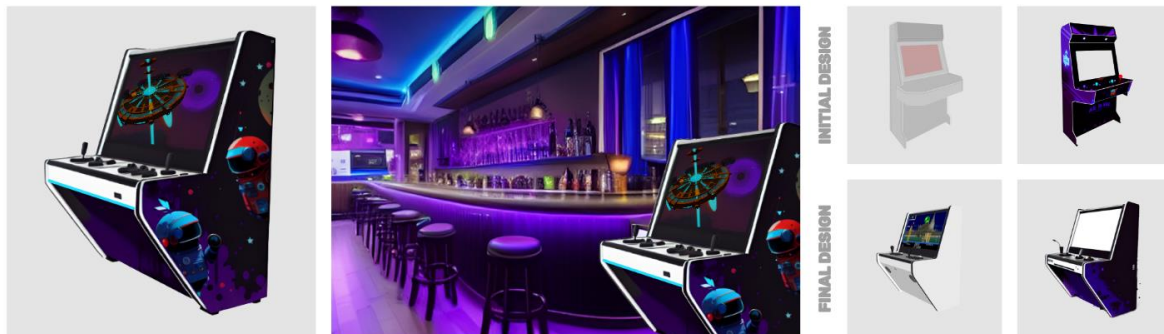


FIGURE H: Concept of arcade machine

To further conjure up images of the concept in the real-world, a graphical illustration of the arcade machine was produced. The design predominantly conformed to the theme of the game prototype developed, howbeit caters the necessitation of an arcade machine that can effectively entice the attention of the audience. Not only, figure H showcases the consideration of two arcade machine models, an ordinary model and wall-mounted model. Contemplating that the particular arcade machine may potentially be situated in a collection of settings, including homes, cafeterias, bars, etc., the wall-mounted model was deemed a modern selection.

ACTIVITY G – PERSONA CREATION AND STORYBOARDING



| PERSONA P1 - DIMITRI BROFLOVSKI | | PERSONA P2 - THOMMAS COOPER | |
|---|---|---|---|
| DEMOGR. | BACKGROUND DESCRIPTION | DEMOGR. | BACKGROUND DESCRIPTION |
|  26 London, UK Unemployed Single Jester | Dimitri is a long-lasting unemployed young man, who currently resides in London. Following his early dropout from university, he has been stagnant ever since, having no specific objectives in life. In spite of few attempts made at locating employment, Dimitri was struck repeatedly with rejection due to the lack of necessary qualifications. Nowadays, Dimitri can be found dillydallying in his day-to-day routine, waking up late and playing video games in his room. Although lately, he has been observed to have isolated himself socially, and further exhibiting signs of aggressive behaviour towards his family. Deep down, whilst Dimitri refuses to receive the corresponding support from a therapist, he yearns for other means that would permit him to break loose from the 'prison' he feels entrapped in. |  55 London, UK Civ. Eng. Divorced Caregiver | Thommas is a man occupying a managerial position at a large corporation in Manchester. Whilst being an utterly active individual, with numerous pastimes, Thommas ensures that the spotlight of his life is captivated by his children. The last couple of months however, his wife decided to proceed with a divorce, subsequently influencing his bond with his children. In due course, Thommas developed severe stress, accumulating clouded emotions and thoughts, and eventually exhibiting slings of depression. Overwhelmed with bitterness, ingratitude, resentment, and frustration, Thommas comprehends that he needs some means to exert some pressure. Nonetheless, considering the possibility of others labelling him as pathetic, Thommas lacks the courage to pursue any support offered. |

FIGURE I: Personas

Albeit development of the game prototype was rather straightforward, development beyond this point necessitated the accurate comprehension of how the services offered by the solution could potentially be employed by the target audience. Personas were thereby created, powerful design tools that embody the expectations, experiences, behaviors, and ambitions of users. Possessing exaggerated characteristics to beware of, Dimitri and Thommas manifested. Both these individuals showcase a background of unfortunate occurrences that halted any meaningful drive to carry on in life, and encounter difficulty pursuing the necessitated support to recover.

STORYBOARD A - A DAY IN THE LIFE OF DIMITRI



STORYBOARD B - A DAY IN THE LIFE OF THOMAS



STORYBOARD C - AN ENCOUNTER BETWEEN THOMAS AND DIMITRI



STORYBOARD D - AN ENCOUNTER BETWEEN DIMITRI AND LAYLA



FIGURE J: Storyboard

The aforementioned personas produced were employed to showcase through the visual illustration of scenarios, of how an objective can be achieved within a system or environment. Storyboarding will help encapsulate the potential experience of users, through a graphical presentation of an imagined sequence of events. Figure J exhibits a collection of scenarios that formulate a narrative on how people connect through the solution. This is accomplished by shedding light on how the arcade machine becomes the excuse for unfamiliar people to come together, break social tension, and establish newfound relationships. Such an occurrence, as envisioned can be coincidentally performed through the strings of fate, or through the arrangement of a rendezvous performed in the application of the arcade game.

ACTIVITY H – APP PROTOTYPE DEVELOPMENT

De novo, in accordance with development and the game characteristics laid out in the research phase, an interactive high-fidelity app prototype sample was on the horizon. Having said that, in order to ensure proper foundation, a blueprints diagram closely associated with a high-level Hierarchical Task Analysis (HTA) diagram was produced in advance. The diagram outlines the structure of the application, specifically crucial functionalities and features offered within the application. Put differently, the diagram outlines high-level operations, and the necessitated steps to be carried out to successfully reach them.

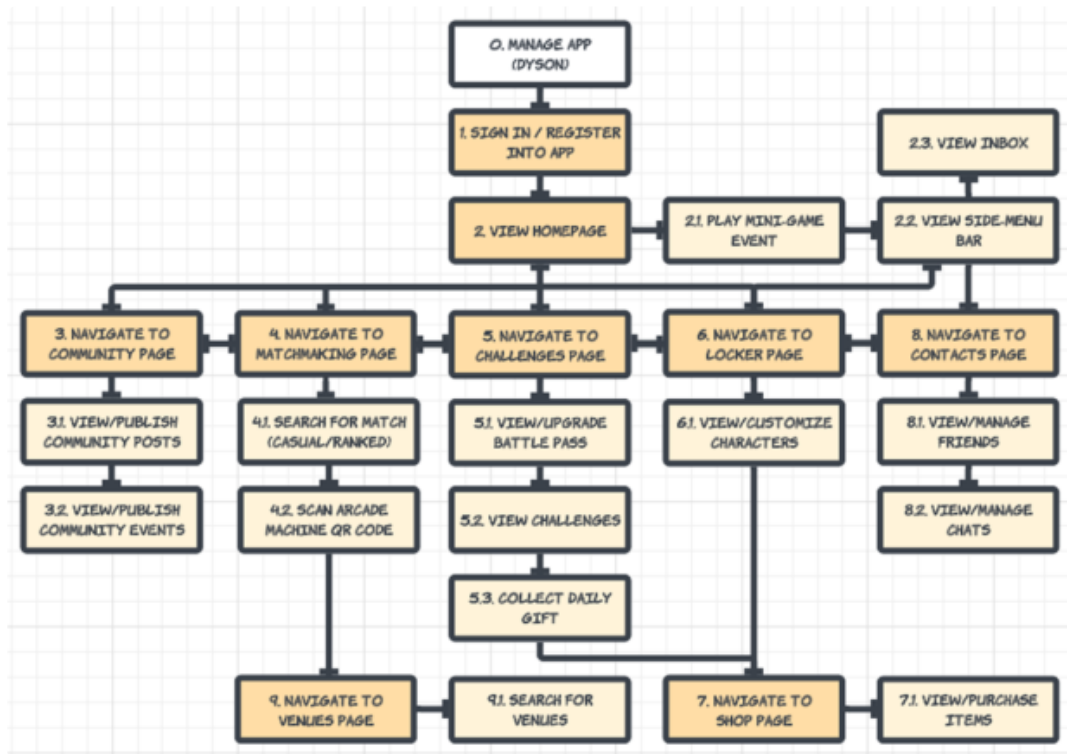


FIGURE K: Structure of app prototype

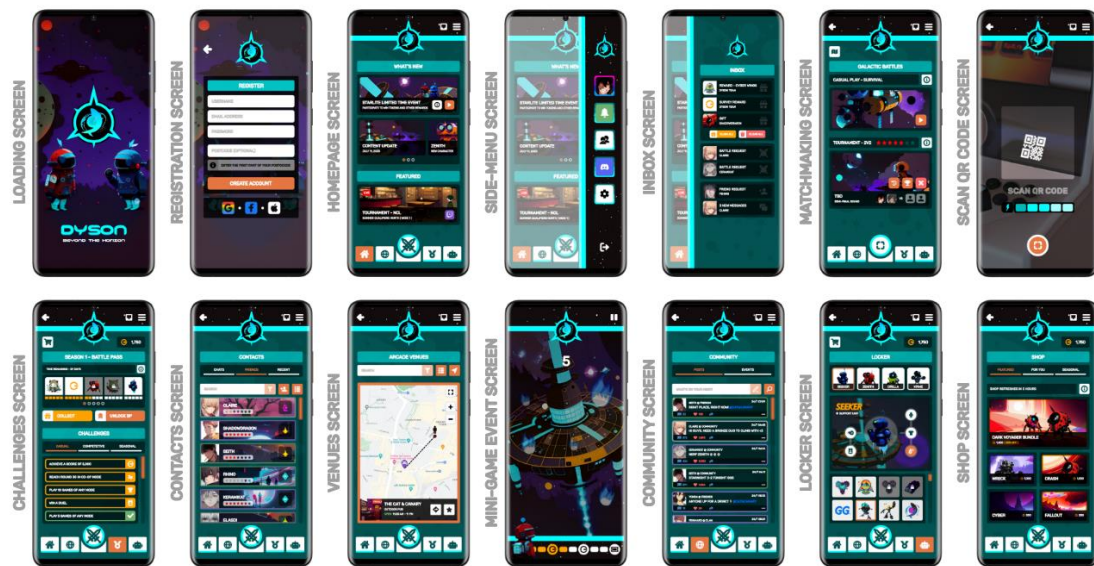


FIGURE L: High-fidelity app prototype sample

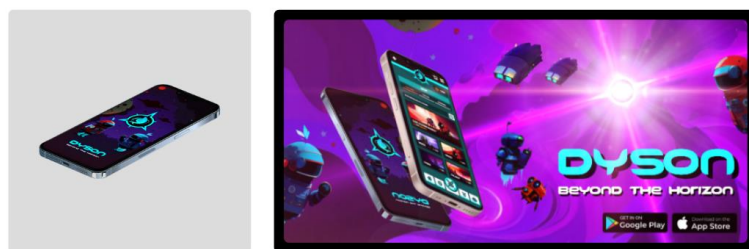


FIGURE M: App prototype advert graphics

The artefact can be described the following underlying services offered to users:

► CONNECTING USERS TO PLAY



FIGURE N1: Connecting players for on-site play sessions

Taking account of the undoubtable difficulties that newcomers may stumble upon in the process of connecting with other people, the application serves as an intermediary tool to bridge that gap. Users are introduced with a sequence of matchmaking features that will permit the locating of nearby users desiring to participate in a play session. As showcased by figure N1, the user can accomplish this through automated matchmaking performed by the system, or manually through the employment of maps that indicate

desired venues available in the vicinity. Proceeding with either decision, a session between players is arranged, and an arcade machine is reserved in accordance with the queue. Upon navigating to the venue and the arcade machine, the user can log into their account in-game via the scanning of the respective QR code on the arcade machine. Howbeit, to prevent users from engaging in excessive unhealthy gaming, an energy system has been implemented. Essentially a rechargeable energy bar that limits the amount of matches that can be played consecutively in a short period of time.

► REWARDING USERS



FIGURE N2: Rewards attained through the app

Engagement with the arcade game contributes towards the progression and completion of various challenges that compensate the user with the acquisition of a collection of items that can be used within the arcade game or the application. These accomplishments can further contribute to a tiered system, commonly referred to as a Battle pass, that can award the user with items with the completion of specified challenges. Besides the core game, the application will offer every now and then the opportunity to participate in limited time minigame events,

essentially short, simplified games from which the user can earn additional items. Nonetheless, rewards are not constrained to the requirement of engagement, as the user is entitled to everyday rewards that can be exchanged free of charge and merely just the press of a button away. Similarly, upon logging in the user can discover presents within their inbox, that can be received from the development team or from friends via the gifting system available in the in-app item shop.

► INTERACTING WITH OTHER USERS ONLINE



FIGURE N3: Online social interactions

users can further create local public events that users can view and partake in. Yet most importantly, through the aforementioned social hotspots, including the physical world, people you meet can be requested to be added as a contact. From there, users can ensue communication in private DMs. Finally, although to a lesser degree, upon reaching certain progression each user is enforced to register with a clan, the members of which the user can interact with across the platform.

To ensure that users engage securely with members of the community, the implementation of a trust system was deemed of utter importance. Identical to the one featured by the social VR game “VRChat”, each user is labelled with a public tag that exhibits their level of trust, or essentially their reputation in the community. This level can be increased or decreased in accordance with the engagement of the user in the community in the course of time.

3.7 EVALUATION OF PROTOTYPES

In absence of human participation during the development process of the artefacts, an extensive and thorough assessment was deemed appropriate. Chief intention of these assessments is the identification of the potential wellbeing effects of the concept, subsequently granting sufficient evidence for supporting the wellbeing of men. That being said, rather than investigating whether the artefacts follow fundamental UI/UX principles or related, assessment is focused completely on the incidental benefits that the concept can bring to the table.

PROVOCATIVE SOCIAL MEDIA POST

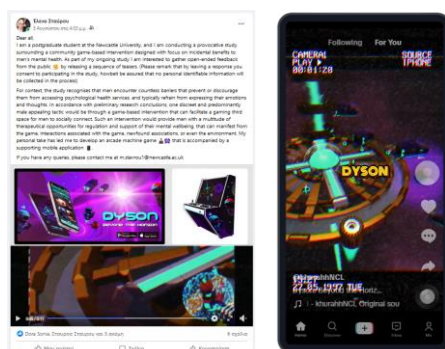


FIGURE O: Facebook and TikTok posts

A post would be posted on Facebook in the interest of gathering open-ended feedback on the concept, from an audience of about 4000 contacts. The post would comprise a detailed account of the topic and concept developed, a consent disclaimer, graphics generated across development, as well as promotional teaser videos of the arcade game. All the above will permit the audience to take a glimpse at the services offered by the concept and evoke a reaction.

In the meantime, the promotional videos generated would be posted on TikTok as well, in the hopes of envisioning the public reception. A brand-new account will be created that will exclusively serve the project needs.

EXPERT STAKEHOLDER EVALUATION

A critical assessment was to be carried out that would predominantly employ Dr Seligman's PERMA theory, encompassing fundamental indicators of positive wellbeing that encourage a state of flourishing. [24] Principally, this state refers to the adequate positive functioning of an individual within their personal and social life. [45] Positive functioning can be succeeded through the realization of purpose, enjoyment, and fulfilment in everyday acts, establishing deep-rooted relationships to depend upon, and so on. [31,32] Consequently, flourishing can be described as a development process, through the ups and downs of life, in pursuance of wellbeing.

These indicators comply with international criteria enforced by systems (e.g., ICD, DSM) employed for the identification and classification of disorders, namely depression and anxiety. [24,46] The indicators employed are as followed:

Positive emotions – The undergoing of emotions that generate a pleasant state of living, emotions that fluctuate in correspondence with the capacity of an individual for positive affectivity. [24,47] Positive emotions, such as joy and optimism, can be encouraged by merely engaging in relishing physical leisure or decompressing using meditative techniques. [24,48]

Engagement – An experience incorporating an objective-centred activity, necessitating sufficient competence to perform successfully or efficiently, and gratifies any advancement towards that objective. [48,49] Put differently, rather than anticipating reaping the fruits of labor, the pleasure from engaging in such an activity should be pursued for its own sake. [24,48]

Positive relationships – Within meaningful relationships reside powerful emotions that can positively amplify lived experiences, in particular amplify a sense of belonging by realizing purpose and meaning. Other times can merely be the means to be uplifted from the bleakest of times or perhaps purely for relying on the comfort these relationships possess. [24,48,50]

Meaning – Contribution to something bigger than the person can generate a sense of purpose and meaning. Members of societal establishments, namely communities and corporations, accomplish this by participating in collective efforts towards mutual pursuing objectives. [24,48,51]

Accomplishment – Whilst accomplishments are not necessarily associated with positive emotions, achievement can critically enhance non-emotional emotions, such that is pride, confidence, and self-esteem. [24,48,52] An accomplished individuals tends to perceive themselves and the world in a better light, make better choices and recover from undesired mistakes. [24,44,26,27]

A psychiatrist was deemed extensively relevant and qualified to be employed for the corresponding assessment, in consideration of the fact that psychiatrists are medical practitioners that specialize in the identification and treatment of mental disorders. [30] On theses grounds an acquainted prevalent clinical psychiatrist/psychologist was employed, possessing long-standing experience in the field of the Greek/Cypriot scene. The psychiatrist exhibited profound interest and an appointment was arranged with his secretary to carry out the assessment.

USER EVALUATION

A participatory assessment was determined to be carried out with the principal aim of comprehending the experiences and emotions of the target audience. Recruitment was carried out through an associate acting as a medium, as well as online platforms, pursuing the recruitment of exclusively male individuals between the ages of 20-49, due to exhibition of heightened suicide rates as preliminary discovered. [12,13] Nonetheless, acceptance of candidate participants was accomplished following the wellbeing assessment of participants, using the Warwick-Edinburgh Mental wellbeing scale. Despite the fact that the project concerns the enhancement of wellbeing, susceptible groups were not sought due to ethical and attentiveness concerns. For instance, an individual undergoing mild depression may not suitable to correspond and engage in the fulness of the experience demanded, especially within a constrained environment. In short, individuals were provided with a link to complete a reliable questionnaire [33] that can measure the mental wellbeing of an individual, in the form of a score. On a first come

first served basis, individuals with adequate scores were selected for the assessment, resulting in the recruitment of four qualified participants. A common date was afterwards agreed upon to conduct the assessment.

| | Participant A | Participant B | Participant C | Participant D |
|-----------------|---------------|---------------|---------------|---------------|
| Age | 48 | 26 | 29 | 34 |
| Wellbeing score | 40p | 43p | 55p | 40p |

FIGURE P: Table of participant details

For the actual assessment, as aforesaid, to effectively assess the emotional journey of participants, a sequence of distinct techniques were deemed appropriate for employment. These were as followed:

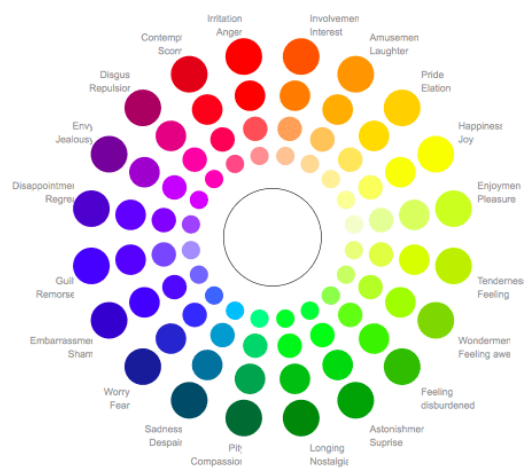


FIGURE Q: Geneva Emotion Wheel (GEW)

(<https://shorturl.at/biqvM>)

►The Geneva Emotion Wheel (GEW) for the measurement of the emotional effects that can be derived from interactions with objects, events, or situations. [35]

►The think aloud technique to permit participants to verbally express themselves, including their optical observations, thoughts, actions, etc., during the play test of the artefact. [36]

►Narrative interviews providing participants with the opportunity to recount their experiences and emotions, through the telling of a story. Unlike conventional interviews, an introductory narrative question is pitched, to which the interviewee has utter freedom to respond to. The researcher refrains from intervening to ensure the encasing of the story in the purest form. [25]

Collection of data will not comprise any type of video or audio recording, ensuring that the participants do not feel pressured in any manner, potentially affecting findings.

Ensuing the evaluation, an inductive narrative analysis will be employed, a structured analysis technique that enables the data to be interpreted to a deeper human and individual extent, by examining the self-expression, language, emotions, thoughts, and motivations exhibited through the relayed narratives of people. This can incorporate a sequence of strategies, including a thematic analysis for the generation of themes and recurring points of interest, that can be employed to discuss relevant implications and create new narratives that embody the experiences of the narratives. [17,34]

4 EVALUATION AND FINDINGS

4.1 WHAT WAS DONE AND HOW

EXPERT STAKEHOLDER EVALUATION ACTIVITY SCHEDULE

► PHASE I – FAMILIARIZATION WITH PROTOTYPES

Activity A: The game prototype was emplaced on a computer device accessible on the scene, that basically enacted as a low-fidelity simulation of an arcade machine. The psychiatrist was then requested to engage with the game prototype for a handful of consecutive rounds, with the aid of the researcher standing in for the second player necessitated to grasp the utmost of the experience. In this manner, the psychiatrist is permitted to indulge in the experience provided by the prototype without restrictions.

Activity B: Ensuing activity A, a link of the app prototype was distributed with the psychiatrist, and with the direction of the researcher the prototype was carefully and extensively explored. A supplementary document was

provisioned, detailing the realized features of the prototype. In the meantime, the researcher ensured the clarification of any game concepts and terminologies that were incomprehensible for the psychiatrist.

► PHASE II – EVALUATION OF PROTOTYPES

Activity C: Upon reaching the end of activity B, the psychiatrist was requested employ the PERMA theory to evaluate the prototypes. In agreement and as recommended, the think aloud technique was employed whilst reviewing the prototypes, permitting the documentation of any potential indicators that encourage or prevent flourishing. As an additional measure, the psychiatrist was inquired at the end to evaluate each indicator in terms of successful encapsulation of flourishing, on a scale of one being 'not effective' and five being 'effective'.

USER EVALUATION ACTIVITY SCHEDULE

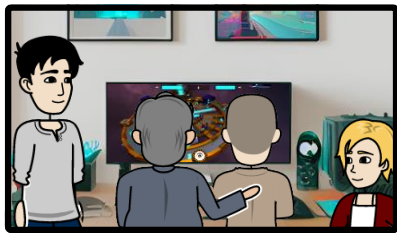


Figure R: Arcade machine simulation

► PHASE I – EVALUATION OF GAME PROTOTYPE

Activity A: The game prototype was emplaced on a computer device that enacted as a low-fidelity simulation of an arcade machine. Participants were coordinated into forming a sequence of unique pairings, that would engage with the game prototype in brief consecutive rounds, while non-active participants were invited to spectate or engage accordingly. Upon completion of each round, participants were requested to assess their emotional experience by employing the Geneva Emotion Wheel (GEW)

to identify the intensity of up to three distinct emotions. The successful interaction of all participants with one another, beckoned the conclusion of activity A. Remark that participants were encouraged during the course of the activity to express themselves as much as is feasible, so as to encapsulate further any elements of significance.

Activity B: By reaching the end of activity A, participants were subsequently interviewed one on one about their experience with the game prototype. A narrative interview methodology was employed, with the leading question inquired as followed: “Can you disclose a detailed account from beginning to end, of your experience with the arcade game and the process of socially connecting with others? What emotions did you feel and what particularly triggered them?”

► PHASE II – EVALUATION OF APP PROTOTYPE

Activity C: Ensuing activity B, a link of the app prototype was distributed amongst participants, and with the direction of the researcher the prototype was carefully and extensively examined. Participants were subsequently permitted to study the prototype, and then rounded up to disclose in a group discussion their perceived thoughts on the characteristics of the prototype, with somewhat relevance to mental wellbeing.

4.2 EVALUATION FINDINGS

PROVOCATIVE SOCIAL MEDIA POST FINDINGS

Regrettably, the post did not generate the anticipated response as merely a total of six people commented on the post. Just the same, the TikTok promotional teaser videos were not engaged with either, altho the recipients that encountered the videos on that platform may potentially have not been qualified to respond accordingly. Even so, the responses that were greeted were majorly positive and encouraging, stating that the concept idea “great” [F1] and “clever” [F4]. Besides that, no exceptional discoveries were procured overall.

EXPERT EVALUATION FINDINGS

Positive Emotions [☆☆☆☆☆]

“Everything the game offers, from the soothing visuals, calming environment and atmosphere, playful troupe of characters, progressive challenges, engaging rewards, etc., permit the player to loosen up by focusing on the game,

and distract themselves from any negative thoughts and emotions. In conjunction with the cooperative aspect of the game, the player can experience positive emotions, such as enjoyment, excitement, and contentment. Cooperation is perceived to repel potential toxic competition, as a low skill ceiling can be identified, that negates negative emotions associated with performance. The energy system correctly restricts excessive gaming and the manifestation of obsession, that can be the reason for distressing emotions, such as aggression, anxiety, and addiction.”

Engagement [☆☆☆☆☆]

“An enjoyable and engaging experience with an effective balance between the requirements of the objectives and the respective abilities to perform adequately. In a similar manner, the application offers such engagement using simplistic microgames. Progress is overall compensated accordingly by rewarding the player upon completion of challenges, and contributing towards the reach of a greater objective, for example advancing through the battle pass tiers and conquering the rankings.”

Positive Relationships [☆☆☆☆☆]

“Coming physically together and working together towards a common goal, can undoubtedly lead to the creation of meaningful and strong relationships. Cooperative play offers multiple opportunities for communication about the game and beyond. Good communication is the backbone of just about every relationship and cooperative games can definitely strengthen the communication between players. The application can be observed to extend this by permitting the player to socially connect and bond with other members of the community, build friendships which can carry over to real-life. Although the application offers excellent safety with the online anonymity, trust system, etc., my biggest concern lies with the presence of potential malicious intent within these newfound relationships. There are no observable restrictions or preferences to prevent unwanted or unsafe relationships.”

Meaning [☆☆☆☆]

“Connecting socially with others can lead to meaningful experiences, especially in the presence of emotional reciprocation, for example the celebration of victories together or even minor gestures like the exchange of game goodies between friends. The game creates a dynamic that bestows the player with a distinctive starring role and responsibilities, that serves purpose when striving towards the completion of common objectives. Although the fulfilment grasped by this method is relatively limited if purpose cannot be found elsewhere in life.”

Accomplishment [☆☆☆☆☆]

“Achievement can be observed across the board, in various intricate ways. Hitting a new high score, advancing the ranks, completing challenges, conquering microgames, winning a tournament etc., all contribute to things that can be successfully completed with adequate determination, competence, or resolution. Not to mention, the player can feel accomplished from overcoming failure in intensified and decisive moments. The design of the game regards failure as merely a bump in the road and enables the player to envision failure in a positive light.”

USER EVALUATION FINDINGS

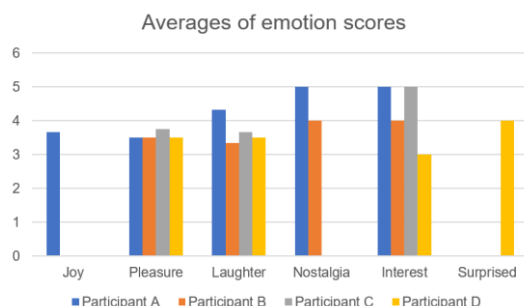


Figure S1: Average scores allocated by participants

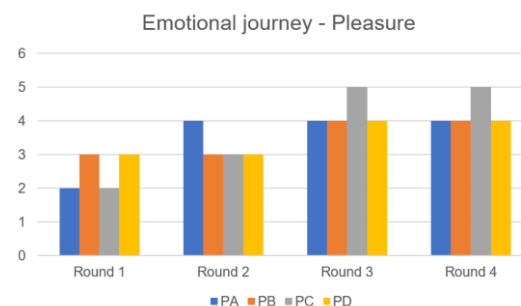


Figure S2: Scores allocated by participants per round

Throughout the expanse of the evaluation, participants conveyed a collection of positive emotions. Figures S1 and S2 exhibit the emotional journey communicated by the Geneva Emotional Wheel, an overall considerably pleasurable experience with relatively intensified emotions.

The analysis conducted from the activities generated the following robust themes:

Group pleasure: Continuous satisfaction between the participants can be perceived from statements and optical observations, throughout the course of the activity. “The atmosphere [surrounding the group] was becoming more and more fervent” [P3], “intense and fun” [P1], with the passing of time. Participants conveyed emotions of enjoyment that derived from “laughing” [P3], “jokes, teasing” [P4], and overall “playfulness between [them]” [P3]. Special enjoyment was experienced “performing well together” [P4], “working together ... and ... helping” [P2] their fellow teammates.

Group endorsement: Supportive acts of encouragement were perceived at differing individual intensities, over the course of the activity. “While [participants] were playing, the other participants were really supportive” [P2], with some “attempting to guide [others]” [P4] and particularly expressing “satisfaction” [P4] when fellow participants were succeeding. Some participants that “did not participate as much” [P4] were optically detected to engage in instinctive actions, specifically “encouraging ... shouts ... from behind” [P1] and casual “chatting” [P4]. Not only, participants indicated that the mere presence of the other participants felt sufficiently “endorsing” [P3].

Cultivating self-comfort: A sense of individual comfort was embedded and enriched by the end of the activity. Commencing the activity, participants expressed feeling “a little awkward” [P1], “uncomfortable” [P4], or merely “hesitant” [P2], due to personal barriers, such as feeling out of place “because of the age difference” between some participants [P1] or being socially “more reserved” [P2]. The “game acted as [an] icebreaker” [P3], and as participants became “more familiar with the game [they were] able to loosen up” [P2] and “become more comfortable with one another” [P3]. Statements explicitly apparent in the witnessed enhanced body language confidence of participants.

Safety concerns: Uncertainty clouded participants concerning the reliability of the safety system in place, in terms of safeguarding vulnerable individuals from potentially malevolent individuals. Participants remarked that “there are a lot of dangers when meeting someone over the internet” [R8], and “trying to meet people safely can be [tricky] ... considering that there might be youngsters interacting with this platform” [R9]. Simply put, the application was perceived to lack the necessary tools to prevent harmful interactions from occurring in the offline environment.

A recommendation by a participant encompassed the implementation of an “identification feature ... that verifies your identity with an ID and a selfie, [in order] to access [certain] ... features” [R13]. Further concern did arise about the potential “discouragement [of] users” [R14] regarding such a feature.

Extending and amplifying interaction: Satisfaction encircled the amplification of elements that enable users to connect with other members of the community, in a meaningful and extensive manner. “A social space ... to connect with others beyond the gaming environment” [R2] and “intermingle through ... posts and comments” [R1]. These alternative communication means were expressed to be of preference due to their perception of being “more comfortable” [R3] and “encouraging [to] users who may feel more closed” [R2]. Participants denoted the access to “the activities” [R1] and “profile of [other] users” [R4] for permitting an individual to be aware and in control of interactions occurring in their space.

Fulfilling accomplishments: Presence of a sequence of encouraging elements was unveiled by participants, that embody the form of gratifying enticements. Challenges emplaced supply users with “enjoyable goals to pursue ... [that] keep them active and focused” [R19] and stir “feelings of accomplishment” [R17]. Users are “rewarded for their efforts” [R18] upon accomplishment of challenges and can even strive towards more returns by accumulating earned “virtual currency ... that can be exchanged for items in the shop” [R18]. Moreover, participants indicated the potential grasp of gratification from flaunting their rewards by feeling “pleased and satisfied to display their accomplishments” [R21].

5 DISCUSSION AND CONCLUSION

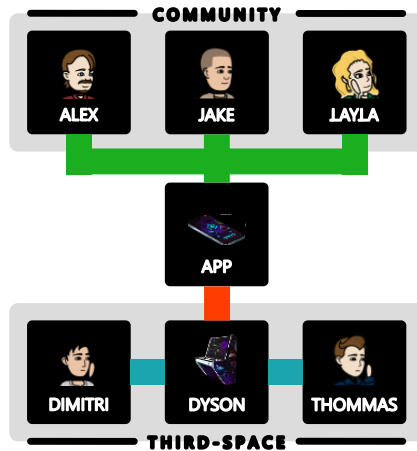


Figure T: Final concept

A brief inspection of the aforementioned findings can conjure up the visualization of a strongly perceived positive outcome. Contributors in agreement depicted of experiences and emotions that can be associated with positive effects to the wellbeing of an individual, deeming the concept as potentially potent in supporting men in their endeavor. Fundamentally and most crucially is the enablement of profound relationships that can provision a man with people that can positively impact their lives. Narratives disclosed of an “intense and fun” atmosphere that can permit people to connect and build meaningful friendships that can carry over to the real world. Comprehending that men suffer from expressing themselves and seek appropriate support, these newfound relationships can be the primary mechanism to unburdening their soul.

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In sum, the findings affirm the beliefs derived from the preliminary research. Nonetheless, these beliefs must be taken with a grain of salt as the assessment was performed on merely a low-fidelity simulation of an arcade machine, meaning that the experiences and emotions studied cannot amount to the actual thing. Not to mention that the game artefact was somewhat influenced by personal preferences and decisions to a degree, constraining the development of an artefact intended for the public. Needless to state that insights from the assessment were greatly limited due to the constrained schedule at hand. Considering that certain aspects of the assessment, such as the formation of relationships, necessitated multifarious sessions over a longer time span, findings can be argued to be too optimistic.

Hence, as part of work to be accomplished in the future, prior to proceeding with further development of the artefacts and constructing an actual arcade machine, another assessment round might be optimal to strengthen existing conclusions. As for development, to resolve any external forces interfering with decisive decisions and judgements, the artefacts could be consulted with human participants by conducting a more collaborative and constructive approach.

To conclude, the project successfully casts light in an underexplored space, and scatters seeds of hope by embracing technological solutions that can be grasped by the modern times we live in. Rather than attempting to reapproach unconventional strategies that completely and utterly fail in encapsulating the targeted audience, more strategies must be focused on supporting men through activities men indulge in. The project can act as the monolith to explore gaming strategies capable of facilitating the characteristics depicted, and study in a deeper degree the perceived benefits, eventually leading to top-grade solutions.

END


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APPENDICES

CONSENT FORMS



CONSENT TO PARTICIPATE IN A RESEARCH STUDY
TITLE OF STUDY: EMBARKING ON MEN'S MENTAL HEALTH

Thank you for your interest in taking part in this research. Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research study. You will be given two copies of this Consent Form. Please complete both; one is for you, and the other is for the research team.

Please initial box to confirm consent:

I confirm that I have read the information sheet dated 26/08/23 (version 1.0) for the above study, I have had the opportunity to consider the information, ask questions and I have had any questions answered satisfactorily. ☒

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. I understand that if I decide to withdraw, any data that I have provided up to that point will be omitted from the study, but some analytical statements based on my data may remain. ☒

I consent to the processing of my personal information (specifically my name and preferred contact details) for the purposes of this research study, as described in the information sheet dated 26/08/23 (version 1.0). ☒

I consent to my research data being pseudonymised and subjected to analysis for the purposes of this study. ☒

I understand that my pseudonymised research data may be published as part of a report. ☒

I consent to the retention of my personal information (specifically my name and preferred contact details) for 4 weeks following the conclusion of this study, for the purpose of being re-contacted if necessary. ☒


I consent to being audio recorded and understand that the recordings will be stored in an encrypted file container accessible only by the researcher and used for research purposes only. ☒

I agree to take part in this research project. ☒

PARTICIPANT DETAILS

Name: Stavros Stavrou Signature: [Signature] Date: 22/08/2023
Preferred Contact Details (email address or phone number): st44@icloud.com

CONSENT FORM V1.0 / DATE 26/08/2023



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PARTICIPANT DETAILS

Name: Maxios Marra Signature: [Signature] Date: 22/08/2023
Preferred Contact Details (email address or phone number): +3536892089

CONSENT FORM V1.0 / DATE 26/08/2023



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PARTICIPANT DETAILS

Name: D. Stylianou Signature: [Signature] Date: 22/08/2023
Preferred Contact Details (email address or phone number): atenis3@hotmail.com

CONSENT FORM V1.0 / DATE 26/08/2023



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PARTICIPANT DETAILS

Name: D. Pervnatos Signature: [Signature] Date: 22/8/2023
Preferred Contact Details (email address or phone number): demetrisprv@gmail.com

CONSENT FORM V1.0 / DATE 26/08/2023

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- VIII I agree to take part in this research project. ☒

PARTICIPANT DETAILS

Dr. G. Gregoriou Signature: [Signature] Date: 27.8.2023
Preferred Contact Details (email address or phone number): 00354 122649901
Psychiatrist / Psychotherapist

DR. GREGORIS GREGORIOU
PSYCHIATRIST

CONSENT FORM V1.0 / DATE 26/08/2023

INTERVIEW TRANSCRIPTS

INTERVIEW I TRANSCRIPT – PARTICIPANT A (ID: P1)

“The invitation alone awakened memories from my teenage years ... I would step out to a local Luna Park, with my friends from school at the time, and play arcade games for hours. Unfortunately, their popularity has decreased over time ... replaced with newer generation of games. As fun as they may be, they stress me out .. and the idea of being home alone in front of a screen does not interest me. The simplicity of the game presented generated sentimental emotions within me, and without second thought I leaped to the offer. For someone my age, playing a game without feeling any pressure is of great importance.”

“I tried to reach out to the other participants as much as I could, since the generational gap was quite apparent. After playing with each other, feelings of intimacy were surprisingly experienced, despite the age difference. I was filled with energy and emotions that I have long neglected ... an experience that took me back in time. The other participants were constantly teasing me, but also encouraging me ... shouts were heard from behind that made the atmosphere even more intense and fun. I was overjoyed and had a lot of fun. They were extremely friendly and pleasant, which made the experience a lot better. Although, I felt a little awkward at first, because of the age difference ... the game brought us together and before long I found myself spending a pleasant time as a group. As an observer, I refrained from participating as much as the other participants could perhaps be annoyed while concentrating on the game. As we played, I discovered that each player had their own role, and this required some level of cooperation ... so I didn't want to impose myself.”

“I must say that the utilization of a keyboard dissociated me from properly imagining the arcade machine presented before me. Although I was quite impressed by the liveliness of the colors and contents employed ... putting me at ease. I was absolutely immersed by the space theme.”

INTERVIEW II TRANSCRIPT – PARTICIPANT B (ID: P2)

“As I entered the room ... I felt a bit uncomfortable. I didn't know any of the participants and I was somewhat hesitant to approach them. [Participant A] was the first to approach me ... we introduced ourselves ... and together we went to meet up with everyone else. I can tell how I still felt uncomfortable and quite tense until that moment.”

“I really enjoy games ... the way I entertain myself at home ever since I was a kid. So, everything presented captivated my attention. With the passing of time, I was becoming more and more familiar with the game ... and I unexpectedly was able to loosen up. Throughout the activity, all the tension I previously felt had vanished ... and I became more comfortable with the other participants. I believe playing alongside others can bring people together ... even someone like me who can be more reserved. I honestly felt enjoyment working together with my fellow teammates ... and especially helping them out. While we were playing the other participants were really supportive ... I felt welcomed ... like I was truly a member of the group. An unprecedented and unique experience.”

INTERVIEW III TRANSCRIPT – PARTICIPANT C (ID: P3)

“Honestly I didn't really have any expectations ahead of time coming here. My expectations were within something ordinary ... like the memorable arcade machines from when I was still a kid. Though I am not the most experienced with them ... at first glance I was amazed by the absolute care delivered to the overall design. The vivid colors that were utilised, strongly attracted my attention.”

“Having the opportunity to be familiarised with the prototypes and mess around with them ... with confidence can say that I enjoyed every moment to the absolute. There was back and forth of playfulness between us ... there was laughing and excitement ... and the atmosphere was becoming more and more fervent. Having the other participants by my side made the experience a lot more joyful and endorsing. Although I was absorbed by the game ... whether I was interacting with my teammates, observing the game, or obliterating enemies ... the game acted as the icebreaker to become more comfortable with one another ... without any noteworthy pressure. On the contrary, despite being instructed to interact with the other participants ... I didn't feel imposed to do so.”

INTERVIEW IV TRANSCRIPT – PARTICIPANT D (ID: P4)

"I didn't quite know what to expect ... I merely accepted the invitation to escape from the everyday routine. The presentation was really exciting. I like to play games, I used to play a handful of games in the past but now because of work and obligations ... only whenever I have free time. For me, this was a rather interesting idea taken from the old, with a simple game of the game time philosophy ... old but modern at the same time."

"Playing with the others, either as player A ... player B ... or even as an observer ... I found myself equally interested. The fact that we were two players, one next to the other, gave me a feeling of familiarity, teamwork, and solidarity. We laughed non-stop ... made jokes ... we teased each other ... played with enthusiasm ... performed well together ... and by the end got closer, from when we initially met. As we were playing and chatting, [participant C] who was an observer at the time, would passionately attempt to guide me ... and squealed with satisfaction when I succeeded. Sadly, [participant A] and [participant B] didn't participate as much ... a missed opportunity in my opinion. I even managed to befriend [participant C]."

"The characters were decent ... the station, the spaceships, and the black hole in the background ... really were magnificent. I would be truly grateful to indulge myself to be entertained with such a game."

DIALOGUE TRANSCRIPTS

DIALOGUE TRANSCRIPT I

| ID | Discussion extract |
|-----|--|
| R1 | Participant D: "I consider the community wall very important. It is what will keep us informed of the activities of other users ... and be able to intermingle through our own posts and comments." |
| R2 | Participant C: "Yeah, I absolutely agree with you. [nodded his head] I mean, the idea of a social space within the application, for the members of the community, is indeed important to connect with others beyond the gaming environment ... especially encourage users who may feel more closed." |
| R3 | Participant B: "Well personally, I tend to prefer online interactions ... as I have difficulty expressing my thoughts when looking at the other person ... and I end up being impolite by turning away or something. So I find this type of communication much more comfortable and convenient. [pursed his lips]" |
| R4 | OTHER PARTICIPANTS NODDED IN UNISON |
| R5 | Participant D: "Uh-huh ... you will also be able to see the profile of users and get a much better understanding of someone in the middle of an exchange." |
| R6 | Participant B: "Oh yeah for sure." |
| R7 | Participant C: "And not only that. We will be able to see their status in the community too. If someone is new or old to the community ... reliable or not ... we will be able to tell. It is reassurance in a way that the person you interact with is not harmful I suppose." |
| R8 | Participant A: "[leaned forward] Though there are a lot of dangers when meeting someone over the internet. People can still not be completely trusted in my opinion. Nevertheless quite clever." |
| R9 | Participant C: "Yeah, you are quite right. Now that you mention it, trying to meet people safely can be rather tricky to say the least. [spoke softly] Not really sure how would you go about safeguarding yourself, considering that there might be youngsters interacting with this platform. [frowned]" |
| R10 | Participant B: "I am thinking that the privileges that come with each status will prevent users from gaining access to selected features." |
| R11 | Participant D: "Might be the case. [nodded his head]" |
| R12 | Participant A: "I think that defeats the purpose though. New members should feel welcomed." |

- Participant C: "Then perhaps ... maybe some sort of identification feature? [hesitant] My little sister plays this game called Roblox that verifies your identity using an ID and a selfie, to access additional features. This does not set the user at any threat whatsoever."
- R14 Participant B: "But would that not discourage users?"
- R15 Participant A: Well everything comes at a cost."
- R16 PARTICIPANTS OBSERVED SCEPTICAL

DIALOGUE TRANSCRIPT II

| ID | Dialogue extract |
|-----------|--|
| R17 | Participant C: "Users are presented with a collection of challenges ... stirring feelings of accomplishment." |
| R18 | Participant A: "Not only this, but players seem to be rewarded for their efforts. What particularly caught my interest was that users can earn virtual currency ... that can be exchanged for items in the shop. Even more incentives to go for." |
| R19 | Participant B: "The way I see it, challenges can act as the driving force behind engagement. Users will undoubtedly be presented with plenty of enjoyable goals to pursue ... that will definitely keep them active and focused ... whilst letting off steam." |
| R20 | OTHER PARTICIPANTS NODDED IN UNISON |
| R21 | Participant B: "Rewards earned can additionally be showcased through several means ... and I believe users would feel really pleased and satisfied to display their accomplishments." |
| R22 | Participant D: "You are right. [nodded his head] I overlooked that completely." |

DIALOGUE TRANSCRIPT III

| ID | Discussion extract |
|-----------|---|
| R23 | Participant B: "What do you think of the design?" |
| R24 | Participant A: "Visually attractive ... the colors and design perfectly match with the game." |

SOCIAL MEDIA POST RESPONSES

| ID | Comments |
|-----------|--|
| F1 | "The concept of what you are doing is great. So, keep up your work on this." |
| F2 | "It is an interesting topic, which has plagued our lives for too long to go unnoticed." |
| F3 | "The concept of using a game to fight depression and promote socialisation is a very good idea!" |
| F4 | "I see a clever idea based on the modern age! Nowadays according to some studies, more and more men have a problem to socialize or express their feelings and this easily causes depression . This arcade machine can indeed be a solution for these people. Well done and good luck!!!" |
| F5 | "I believe psychologists would not agree that this would be the best solution. In the times we live though the solutions are much more complicated and sometimes we must come up with a different approach. So, from this perspective we can say it is an easy way to connect. But still it's the modern way that can't be compared with real life." |
| F6 | "Any game that promotes teamwork as a prerequisite for performance promotes a self-development mentality within oneself. Controlling emotions and communicating effectively can lead to a sense of team bonding and pleasant emotions within a community. If a game can design certain tasks or goals that bind |

an end goal, progress or winning through positive communication and expression in my opinion will surely promote a sense of understanding the greater meaning of positive reinforcement. Encouraging each other and complimenting individual plays or maintaining a one for all and all for one attitude when mistakes happen."
