

The psychological and physiological effect of “Cool Down Pink” on human behavior

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Abstract & Overview

The relaxing effect of Cool Down Pink is not only scientifically highly interesting but also includes effective solutions for a social problem: the increasing aggressivity in many domains, ranging from the penal system to schools, medical institutions and public security zones (airports, state borders, stations etc.).

After four years the application of Cool Down Pink in the penal system in Switzerland has shown positive results. According to the statements of the prison directors, the prisoners aggressive behavior has been greatly reduced. Even the aggressive prisoners are relaxing in a significantly shorter period. This means there is an efficient improvement in situations of arrest as well as an optimization of security.

Cool Down Pink has also been employed in various schools, psychiatric hospitals and institutions for mentally handicapped peoples. The evaluation is not yet completed.

Especially remarkable with the Cool Down Pink is that the effect becomes effective after only a few minutes and that it is based on an unconscious action and hence can be converted into an inconspicuous intervention measure.



Calming prison cell, Police Biel, Switzerland

1. Methods

As security for the results a methodic triangulation of the subtypus across-method with a normed colour (Cool Down Pink) has been used.

- Measurement of the change of blood pressure and pulse rate before entrance and after the departure of the cabin.
- Observations of aggressive prisoners behavior change in Cool Down Pink cells in form of an unstructive, hidden and notparticipating observation as knowledge generating evaluation method.

1.1 Test situation in the colour cabin

The colour cabin has a base of 1 m² and a heigh of 2 m. Three walls as well as the ceiling are painted with Cool Down Pink. Illumination is with Osram Biolux full spectrum light. The cabin has been placed in various shopping centers. The participation was voluntarily. The duration was optional because some people react very strongly and violently to colours. Therefore a normed period of the time in the cabin has not been possible to establish. On average the duration of stay (period) ranged between 1 to 5 minutes. Before going into the colour cabin some particulars were noted (age, sex, state of health, favourite and refused colours). No detailed explanation of the test progress was provided to avoid influencing the probant. The blood pressure and pulse rate has been measured and noted. The probant entered the cabin and sat down facing the coloured wall. After leaving the cabin the blood pressure and the pulse rate measured once more and he or she was asked after his or her health.

There were no comparison measurements with a white cabin, because the probants has already been in a normal daily situation (shopping center) before entering the colour cabin. It is scientifically proven that within a socio-psychological evaluation already the observation leads to a behavioural change. Therefore a comparing research to a white colour cabin would not have been provided any information because it has not been established that the white colour works physiologically and psychologically neutral.

1.2 Evaluation procedure in the penal system

The evaluation has been used as an explorative method to research the interventional process. It is also usable as a hypothesis proving method to support the efficiency. The observations in the penal system (approximately ten prisons in Switzerland) were taken by the penal institution officers during their normal work. As a comparison the behaviour in white cells was also noted. Beside the aggressive behaviour (verbal attacks, violent attacks, damage to property, screaming, staining the walls with eces) it has been observed how quickly the prisoners relax.

Studies on the effect on drunken persons in cells and how quickly they become sober as well as in other spheres (schools, social institutions, psychiatric institutions, hospitals, security) are still currently being evaluated.

2. Results

The validity of the common results were based on the used methodic triangulation of an objective measuring method (blood pressure and pulse rate measurement) and an evaluation measurement in the praxis transfer (observations). The results obtained from the different methods for the Cool Down Pink effect showed correlation to the validity of the research.

2.1 Results of the Cool Down Pink colour cabin

Table 1. Change in blood pressure

	Systolic blood pressure	Diastolic blood pressure	Pulse rate
Figures before	121 ± 28.9	87 ± 24.1	89 ± 17.5
Figures after	117 ± 28.5	83 ± 21.3	89.4
Significance P	0.02*	0.01*	0.83

Values as average values ± S.D.

Number of test persons: 193

*statistical very significant, because $P < 0.03$

The statistical shows highly significant results. As well as the systolic blood pressure the diastolic blood pressure sank in the Cool Down Pink cabin within 1-5 minutes with the above mentioned average values. Subanalysis concerning the sex, age or medical diagnose (blood high pressure) has not been carried out.

2.2 Preliminary results of the evaluation in the penal system

In the high security section of the prison Pfäffikon ZH, Switzerland four cells are since 2007 in Cool Down Pink installed. These cells are especially reserved for prisoners with a specially high aggression potential. According to the statement of the prison's director the aggressive behaviour of the concerned prisoners has greatly decreased. In police station cells it has been observed that the aggressive prisoners become quick much more relaxed than in the white cells and that they can return earlier to the normal police prison. The evaluations are finished in many places not yet. The interim findings support the present evaluation. Negative behaviour changes or side effects have not been observed. Based on the evaluation lasting four years the high security tract of the prison in Pfäffikon ZH the aggression depression effect of Cool Down Pink in the penal system can be confirmed.

3. Hypothesis and conclusions

The short reaction time (1-5 minutes) on the decrease in blood pressure and the fundamental blood pressure depression are indicators of a vegetative, hormonal steering mechanism which becomes activated by Cool Down Pink. Connections of the fiber structures in the visual route to the Hypothalamus (Nucleus suprachiasmaticus) as well as from the nucleus to the Epiphyse are today scientifically proven. The Epiphyse sets melatonin free and controls the endocrinical hormone system and regulates the essential activities. That means that the functions of vision go beyond the pure visual realisation. Connected with the hormonal system they influence directly our feeling of well-being. The

hypothesis that the decrease in blood pressure due to Cool Down Pink becomes directly released in the interbrain is proven by this statement. Cool Down Pink primarily reduces the blood pressure. This is a pure corporal effect which leads in sequence to a psychological relaxation.

The realisation of colours is regarded as a multi-layer in the brain research: the physiology of the optic vision, the network with the hormonal system as well as the cognitive realization process.

The cognitive psychology concerns the process of realization and the question if and how human behaviour is consciously influenced by colours. Here we can observe complex behaviour phenomena, which are influenced by cultural or individual learning experiences.

In individual cases this can mean that a probant, who learned that pink is a female or gay colour (social influence), will not relax and that the blood pressure decrease will not occur. In connection with an intervention in the penal system this phenomenon has not been observed, because the prisoner cannot decide his handling by himself.

The blood pressure sinking effect proves Cool Down Pink to be an efficient and low threshold intervention instrument in the fight against aggression..

4. List of bibliographical references

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Acknowledgements

Dr. A.Paula Simões-Wüst, Head of Research, Paracelsus-Spital, Richterswil, Switzerland for scientific support

Dold AG, Lacke und Farben, Wallisellen, Switzerland for the technical support in the development of the product